

DRAFT



AUTORITÉ
DES MARCHÉS
FINANCIERS

GUIDELINE ON CAPITAL ADEQUACY REQUIREMENTS

PROPERTY AND CASUALTY INSURANCE

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CONTENTS

Chapter 1.	Introduction and General Guidance.....	4
1.1	Introduction.....	4
1.2	General Guidance.....	5
Chapter 2.	Capital Available	1244
2.1	Capital Components	1244
2.2	Capital Composition Limits	1745
2.3	Deductions/Adjustments	1846
2.4	Interests in and Loans to Subsidiaries, Associates, Joint Ventures and Limited Partnerships	2149
Chapter 3.	Insurance Risk.....	2320
3.1	Description of Insurance Risk	2320
3.2	Diversification Credit within Insurance Risk.....	2320
3.3	Margins for Unpaid Claims and Premium Liabilities	2320
3.4	Risk Mitigation and Risk Transfer Mechanisms - Reinsurance.....	2524
3.5	Self-Insured Retentions	3026
3.6	Catastrophes	3026
3.7	Other Classes.....	3430
Chapter 4.	Market Risk.....	3632
4.1	Interest Rate Risk	3632
4.2	Foreign Exchange Risk.....	4237
4.3	Equity Risk	4544
4.4	Real Estate Risk	4642
4.5	Other Market Risk Exposures	4642
Chapter 5.	Credit Risk	4743
5.1	Capital Requirements for Balance Sheet Assets.....	4743
5.1.1	Use of Ratings	4843
5.2	Capital Requirements for Off-Balance Sheet Assets Exposures	5750
5.3	Capital Treatment of Collateral and Guarantees	6756
Chapter 6.	Operational Risk.....	7259
6.1	Operational Risk Formula	7259
6.2	Components of Operational Risk Margin	7259
Chapter 7.	Diversification Credit	7562
7.1	Risk Aggregation and Diversification Credit	7562

	Appendix 1:	Qualifying criteria for category A capital instruments	7663
	Appendix 2:	Qualifying criteria for category B capital instruments	7865
	Appendix 3:	Qualifying criteria for category C capital instruments	8067
	Appendix 4:	Instructions – Capital Required – Accident and Sickness Insurance	8369
	Appendix 5:	Worksheet – Capital Required – Accident and Sickness Insurance	8773

Chapter 1. Introduction and General Guidance

1.1 Introduction

1.1.1 Guideline Objective

An Act respecting insurance (R.S.Q., chapter A-32) (the “Act”) prescribes that every insurer must adhere to sound and prudent management practices.”¹ Moreover, under the Act, guidelines pertaining notably to the adequacy of capital may be given to insurers.²

The objective of these guidelines is essentially to increase the transparency and predictability of the criteria used by the *Autorité des marchés financiers* (the “AMF”) in assessing the quality and prudence of the management practices of the financial institutions for which those criteria are intended. The ability of these institutions to meet their obligations toward investors and policyholders is key to achieving this objective. This principle is reflected in the capital adequacy requirements for property and casualty (“P&C”) insurers (“damage” insurers in Québec) set forth in this guideline.

The risk-based capital adequacy framework is based on an assessment of the riskiness of ~~insurance risk, market risk, credit risk and operational risk~~~~asset yield deficiency, policy liabilities, interest rates, foreign exchange rates, and structured settlements, letters of credit, derivatives and other exposures~~, by applying varying risk factors and margins. P&C insurers are required to meet a **capital available to capital required** test. The definition of capital available to be used for this purpose is described in chapter 2 and is calculated on a consolidated basis.

This guideline outlines the capital framework, using a risk-based formula for target capital requirements and minimum capital requirements~~ed~~, and defines the capital that is available to meet the minimum standard. The Minimum Capital Test (“MCT”) determines the minimum capital required and not ~~necessarily~~ the optimum capital required at which an insurer must operate.

1.1.2 Scope of Application

The *Guideline on Capital Adequacy Requirements* applies to all P&C insurers licensed to transact insurance business in Québec and holding a charter issued by the province of Québec or by another Canadian jurisdiction (hereinafter the “P&C insurers”).

This guideline applies on a consolidated basis in accordance with Canadian generally accepted accounting principles (“CGAAP”). Accordingly, each component of capital available and capital required is calculated in such a way as to include all of the insurer’s operations as well as any financial activity by its subsidiaries.

For purposes of this guideline, non-qualifying subsidiaries³ should be deconsolidated and accounted for using the equity method. Interests in non-qualifying subsidiaries are therefore

¹ Section 222.1.

² Sections 325.0.1 and 325.0.2.

excluded from capital available and capital required calculations, as are loans or other debt instruments issued to them if they are considered as capital in the entity.

For insurers operating in both P&C insurance and life and health insurance (“insurance of persons” in Québec), this guideline only applies to balance sheet items and off-balance-sheet instruments attributed by the insurer to the P&C insurance sector and to the accident and sickness class of insurance business.

1.1.3 Clarification

Unless the context indicates otherwise, in this guideline, concepts pertaining to corporate relationships, such as subsidiaries, associates, joint ventures and related enterprises, as well as terminology, should be interpreted in accordance with CGAAP.

Assets and liabilities of subsidiaries consolidated for the purposes of this guideline are therefore subject to asset-risk factors and liability margins in the insurer’s MCT.

1.1.4 Interpretation

Because the requirements set forth in this guideline are intended mainly as guidance for managers, the terms, conditions and definitions contained therein may not cover all situations arising in practice. The results of applying these requirements should therefore not be interpreted as being the sole indicator for assessing an insurer’s financial position or the quality of its management. Insurers are expected to submit to the AMF beforehand, where applicable, any situation for which treatment is not covered in this guideline or for which the recommended treatment seems inadequate. This also applies with respect to any issue arising from an interpretation of the requirements set forth in this guideline.

Furthermore, notwithstanding the stated requirements, in any case where the AMF believes that the capital treatment is inappropriate, a specific capital requirement may be determined.

1.1.5 — Divulgence

~~The calculations required by this guideline and their results must be disclosed on pages 30.70, 30.71, 30.73 and 70.38 of the P&C-1 Annual Return form. The form must be submitted to the AMF in accordance with section 305 of the Act.~~

1.2 General Guidance

1.2.1 Risk-Based Capital adequacy

The AMF expects P&C insurers to meet the MCT capital requirements at all times. To be considered as regulatory capital to be used for this purpose, capital instruments must meet

³ Under this guideline, a subsidiary that is a dissimilar regulated financial institution, such as a bank, trust company, savings company or life and health insurer, and a subsidiary, which is not a legal person under Section 244.2 of the Act, are non-qualifying subsidiaries.

qualifying criteria and are subject to capital composition limits and deductions and adjustments (reference Chapter 2). Under this guideline, the notion of capital encompasses capital available within all subsidiaries that are consolidated for the purpose of calculating the MCT ratio.

Under the MCT, capital requirements for various risks are set directly at a pre-determined target confidence level. The AMF has elected 99% of the expected shortfall (conditional tail expectation or CTE 99%) over a one-year time horizon as a target confidence level⁴.

As a first step, the risk factors defined in this guideline are used to compute the target capital requirements on a consolidated basis. The minimum capital required is then determined as the sum of the target capital requirements for each risk component, less the diversification credit, the result of which is divided by 1.5.

The target capital requirements are calculated as follows:

Sum of:

- capital required for insurance risk (reference chapter 3):
 - ☐ margins required for unpaid claims and premium liabilities;
 - ☐ margin required for reinsurance ceded under unregistered reinsurance agreements;
 - ☐ catastrophe reserves.
- capital required for market risk (reference chapter 4):
 - ☐ margin required for interest rate risk;
 - ☐ margin required for foreign exchange risk;
 - ☐ capital required for equity risk;
 - ☐ capital required for real estate risk;
 - ☐ capital required for other market risk exposures.
- capital required for credit risk (reference chapter 5):
 - ☐ capital required for counterparty default risk for balance sheet assets;
 - ☐ capital required for counterparty default risk for off-balance sheet exposures;
 - ☐ capital required for collateral held for unregistered reinsurance (reference section 3.4.2) and self-insured retention (reference section 3.5).
- capital required for operational risk (reference chapter 6).

Less:

- diversification credit (reference chapter 7).

The minimum capital required is then calculated as follows:

⁴ As an alternative, the AMF used a value at risk (VaR) at 99.5% confidence level or expert judgement when it was not practical to use the CTE approach.

- target capital required divided by 1.5.

The MCT ratio, expressed as a percentage, is then calculated by dividing the insurer's capital available by minimum capital required.

1.2.42 Minimum Ratio, Supervisory Target Ratio and Internal Target–Capital Target Ratio

P&C insurers are required to maintain, continuously and at a minimum, an MCT ratio of The requirements in this guideline comprise three stages:

- ~~determining the capital available to the insurer;~~
- ~~establishing the risk-based minimum capital requirement;~~
- ~~establishing the MCT requirements as a ratio of capital available to capital required.~~

In order to meet the 100% minimum ratio, this means that capital available must be equal or superior to minimum capital required. However, during the course of its supervisory activities, the AMF expects an MCT supervisory target capital ratio, or supervisory target ratio, of 150%.

This 150% supervisory target ratio provides a sufficient cushion above the minimum capital required and allows for early detection of issues by the AMF, so that intervention can be timely if the insurer's situation so requires, and for there to be a reasonable expectation that the insurer's actions can successfully address the difficulties. The supervisory target ratio provides additional capacity to absorb unexpected losses without the need of any AMF intervention.

~~Moreover~~However, this the minimum ratio and the supervisory target ratio does not explicitly consider all risks that could occur. In fact, these ratios are based upon simplifying assumptions common to a standard approach to solvency valuation. Quantifying several of these risks using a standard approach methodology for all insurers is not warranted at this time given that, on the one hand, the level of exposure to these risks and the risk profile varies from one insurer to the other and that, on the other hand, using a standard approach to measure them is difficult.

Consequently, the AMF requires that each insurer assess its overall capital adequacy based on its risk profile for the purposes of sound and prudent management. Insurers will therefore determine an internal target–capital target ratio that is superior to the 150% minimum supervisory target ratio.

To establish this internal capital target ratio, insurers must determine ~~the a target~~ capital required to cover the risks related to their operations using various techniques such as sensitivity analyses based on various scenarios and simulations⁵. Therefore, in addition to the ~~other~~ risks covered in the calculation of the MCT ratio, the internal target–capital target ratio must also take into account at least the following risks:

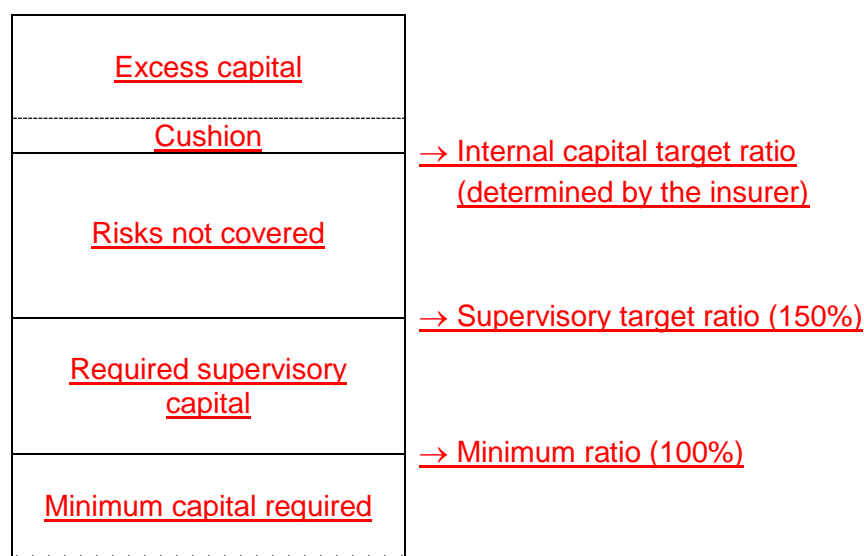
⁵ In order to make sure that the internal capital target ratio is above the supervisory target ratio, the level of internal target capital should be expressed as a percentage of the insurer's minimum capital requirements as set forth following this guideline, and compared to the minimum capital ratio and the supervisory target capital ratios.

- residual credit, market and insurance risks; for example, ~~foreign exchange risk and~~ certain risks related to risk transfers are types of market risk not covered in the calculation of the MCT ratio;
- ~~operational risks;~~
- liquidity risks;
- concentration risk;
- legal and regulatory risks;
- strategic risks;
- reputation risk.

Insurers should then consider the risks specific to them when determining their respective ~~internal target~~ capital ~~target~~ ratios. Insurers can meet this requirement by drawing, for example, on dynamic capital adequacy testing (“DCAT”) plausible adverse scenarios. The impact of the various scenarios should be tested on the ~~internal target~~ capital ~~target~~ ratio instead of the insurer’s actual capital ratio.

The AMF’s expectations are ~~specified~~ illustrated in the diagram below.

Minimum ratio, supervisory target ratio and ~~internal target~~ capital ~~target~~ ratio



Based on the above diagram, insurers should also provide a capital amount (as shown by the cushion) to take into account the variable nature of the MCT ratio and the possibility that it could fall below their internal capital target ratio under their routine operating conditions due, among other reasons, to normal market volatility and insurance experience. Issues such as access to capital limitations should also be considered when determining this cushion.

In addition, the AMF expects insurers' level of capital to exceed the level of capital underlying the internal capital target ratio and the cushion, to enable them to:

- maintain or attain a credit rating;
- innovate by, for example, developing new products;
- keep pace with business combination trends, in particular, opportunities to acquire portfolios or companies;
- be prepared for global industry-wide change, including standard-setting developments such as changes in accounting and actuarial standards.

The internal target-capital target ratio must be reported in the DCAT Report. At the AMF's request, insurers will be required to justify their internal target-capital target ratio and support their explanations with an appropriate calculation method and data. The AMF may require an insurer to establish a new internal capital target ratio if the justifications do not demonstrate to the AMF's satisfaction that the capital ratio submitted is relevant and sufficient.

Failure to comply with the internal capital target ratio will result in supervisory measures by the AMF commensurate with the circumstances and the corrective actions taken by the insurer to comply with the established target.

~~For consistency, the AMF uses this target capital ratio concept for both life and health insurers and P&C insurers.~~

1.2.23 Considerations Relating to Reinsurance

1.2.23.1 Definitions

In this guideline, the expressions "registered reinsurance" and "unregistered reinsurance" refer to Appendix A of the *Reinsurance Risk Management Guideline*.

1.2.23.2 Registered Reinsurance

Capital requirement calculations under the MCT reflect insurers' use of registered reinsurance in the course of their activities. Amounts receivable and recoverable under registered reinsurance agreements are subject to the asset factors described in section 3.4.15.1.2 of this guideline.

1.2.23.3 Unregistered Reinsurance

For business under an unregistered reinsurance agreement, amounts receivable and recoverable from the agreement and reported on the balance sheet are deducted from capital available, that is, calculations must be made as if the business was not registered, to the extent that they are not covered by amounts payable to assuming reinsurers. A ceding insurer may also ask the AMF to benefit from a credit in respect of this capital requirement if it demonstrates

to the AMF that these amounts are covered by guarantee instruments⁶, obtained from assuming reinsurers, which allow the insurer to guarantee the performance of its obligations in Québec.

Section ~~4.3.23.4.2~~ of this guideline provides additional guidance on capital deduction, the margin requirement on amounts recoverable from unregistered reinsurance and the limit on the use of guarantee instruments.

~~1.2.3 Capital Required~~

~~Capital required is determined on a consolidated basis, but in agreement with section 1.1.2 which provides for the deconsolidation of non-qualifying subsidiaries.~~

~~Capital required is the sum of:~~

- ~~• capital for assets (reference chapter 3);~~
- ~~• margins for unearned premiums, unpaid claims and premium deficiencies (reference chapter 4);~~
- ~~• catastrophe reserves and additional policy provisions (reference chapter 4);~~
- ~~• margin for reinsurance ceded under unregistered reinsurance agreements (reference section 4.3.2);~~
- ~~• margin for interest rate risk (chapter 5);~~
- ~~• capital for structured settlements, letters of credit, derivatives and other exposures (reference chapter 7).~~

~~Notwithstanding the stated requirements, in any case where the AMF believes that the capital treatment is inappropriate, a specific capital requirement may be determined.~~

~~1.2.4 Transitional Period~~

~~P&C insurers are required to phase-in the capital impact of the revised MCT framework. The phase-in should be done on a straight-line basis, over eight quarters, starting on January 1, 2015 for insurers with a December 31, 2015 year-end and on February 1 for insurers with an October 31, 2015 year-end.~~

~~The capital impact to be phased-in must be computed separately for capital available and capital required, equal to the difference between capital available (old framework versus new framework) and capital required (old framework versus new framework). In order to do so, P&C insurers are required to calculate two sets of MCT requirements as at December 31, 2014 (or January 31, 2015): one under the old framework, and another one under the new framework. The requirements under the old framework are the same as those prepared and filed with the AMF for regulatory compliance purposes. The MCT requirements under the new framework as at December 31, 2014 (or January 31, 2015) do not need to be filed with the AMF.~~

⁶ The AMF may, if deemed appropriate, require the insurer to provide the necessary documents or to observe certain formalities in order to obtain the credit. Insurers are advised to consult the AMF's Website before any request to see if instructions have been issued in this regard.

In order to ensure that all insurers are treated equally, the phase-in is mandatory for all insurers whether they are affected positively or negatively.

For example, a P&C insurer with a December 31 year-end must file with the AMF its MCT as at December 31, 2014 under the old framework and must calculate an additional MCT under the new framework at the same date. The difference in capital available and the difference in capital required are the capital impacts to be amortized over the next eight quarters, with 1/8th of the total impact to be reflected in capital available and capital required reported on March 31, 2015. The amortization of capital available and capital required impact amounts must be reported each quarter until December 31, 2016. Insurers with an October 31 year-end must calculate the capital impacts (old versus new framework) as at January 31, 2015, with 1/8th of the capital available and capital required impacts to be reflected in April 30, 2015 returns. The amortization of capital available and capital required amounts must be reported each quarter until January 31, 2017.

In a case where a material change could affect a P&C insurer's risk exposure during the phase-in period, it must contact the AMF to determine how the phase-in amount should be adjusted.

Chapter 2. Capital Available

This chapter establishes requirements for the adequacy and appropriateness of capital resources used to meet capital requirements, having regard to their ability to meet P&C insurers' obligations to policyholders and creditors and to absorb losses in periods of stress. This includes the determination of the criteria for assessing the quality of capital components for inclusion in capital available and the composition of capital available, focussing on the predominance of highest quality capital.

2.1 Capital ~~Available~~Components

Capital available is determined on a consolidated basis, but in agreement with section 1.1.2 which provides for the deconsolidation of non-qualifying subsidiaries.

The ~~three-four~~ primary considerations ~~for underlying the qualifying criteria of defining~~ the capital available components of a financial institution for ~~the~~ purposes of measuring capital adequacy are:

- its availability: the extent to which the capital element is fully paid in and available to absorb losses;
- its permanence: the period for, and extent to which, the capital element is available;
- absence of encumbrances and mandatory servicing costs: the extent to which the capital element is free from mandatory payments or encumbrances; ~~its being free of any obligation to make payments from earnings;~~
- subordination: the extent to which and the circumstances under which the capital element ~~is~~ its subordinated legal position to the rights of policyholders and other creditors of the institution ~~in an insolvency or winding-up.~~

The integrity of capital elements is paramount to the protection of policyholders. Therefore, these considerations will be taken into account in the overall assessment of a P&C insurer's financial condition.

~~Capital available includes instruments with residual rights that are subordinate to the rights of policyholders and will be outstanding over the medium term. It also includes an amount to reflect changes in the market value of investments.~~

Capital available is defined as the sum of the following components: common equity (or category A capital), category B capital, and category C capital, ~~subject to requirements of the AMF:~~

2.1.1 Category A Capital (common equity)

- Common shares~~Common shares~~ issued by the P&C insurer that meet the category A

qualifying criteria as described in Appendix 1;

- contributed surplus (share premium) resulting from the issuance of common equity capital instruments;
- ~~equity;~~
- ~~shares treated as equity under CGAAP;~~
- other contributed surplus⁷;
- retained earnings;
- ~~earthquake, nuclear and reserves;~~
- ~~general and contingency reserves;~~
- ~~certain components of~~ accumulated other comprehensive income.
- a. ~~For an instrument to be included in capital available under category A, it must meet all of the criteria listed in Appendix 1. accumulated net after-tax unrealized gains(losses) on available-for-sale equity securities;~~
- b. ~~accumulated net after-tax unrealized gains (losses) on available-for-sale debt securities;~~

⁷ Where repayment is subject to the AMF's approval.

2.1.2 Category B Capital

- Instruments issued by the insurer that meet category B criteria listed in Appendix 2 and do not meet the criteria for classification as category A, subject to applicable limits;
- contributed surplus (share premium) resulting from the issuance of instruments meeting category B criteria.

For an instrument to be included in capital available under category B, it must meet all of the criteria listed in Appendix 2.

Purchase for cancellation of category B capital instruments is permitted at any time with the prior approval of the AMF. For further clarity, a purchase for cancellation does not constitute a call option at the initiative of the issuer as described in the qualifying criteria for category B capital instruments laid down in Appendix 2.

Tax and regulatory event calls are permitted during an instrument's life subject to the prior approval of the AMF and provided the insurer was not in a position to anticipate such an event at the time of issuance.

Dividend stopper arrangements that stop payments on common shares or category B instruments are permissible provided the stopper does not impede the full discretion the insurer must have at all times to cancel distributions or dividends on the category B instrument, nor must it act in a way that could hinder the recapitalization of the insurer pursuant to qualifying criterion #13 of Appendix 2. For example, it would not be permitted for a stopper on a category B instrument to:

- attempt to stop payment on another instrument where the payments on the other instrument were not also fully discretionary;
- prevent distributions to shareholders for a period that extends beyond the point in time that dividends or distributions on the category B instrument are resumed;
- impede the normal operation of the insurer or any restructuring activity, including acquisitions or disposals.

A dividend stopper may also act to prohibit actions that are equivalent to the payment of a dividend, such as the insurer undertaking discretionary share buybacks.

Where an amendment or variance of a category B instrument's terms and conditions affects its recognition as capital available under this guideline, such amendment or variance will only be permitted with the prior approval of the AMF⁸.

⁸ Any modification of, addition to, or renewal or extension of the term of an instrument issued to a related enterprise may be subject to the provisions of the Act regarding transactions with restricted parties and with associates of directors or officers.

Insurers are permitted to “re-open” offerings of capital instruments to increase the principal amount of the original issuance provided that call options will only be exercised, with the prior approval of the AMF, on or after the fifth anniversary of the closing date of the latest re-opened tranche of securities.

Defeasance options may only be exercised on or after the fifth anniversary of the closing date with the prior approval of the AMF.

2.1.3 Category C Capital

- Instruments issued by the insurer that meet category C criteria listed in Appendix 3, but do not meet the category A or B criteria, subject to an applicable limit;
- contributed surplus (share premium) resulting from the issuance of instruments meeting the category C criteria.

For an instrument to be included in capital available under category C, it must meet all of the criteria listed in Appendix 3.

Category C capital instruments 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 issuer.

Purchase for cancellation of category C capital instruments is permitted at any time with the prior approval of the AMF. For further clarity, a purchase for cancellation does not constitute a call option at the initiative of the issuer as described in the qualifying criteria for category C capital instruments laid down in Appendix 3.

Tax and regulatory event calls are permitted during an instrument’s life subject to the prior approval of the AMF and provided the insurer was not in a position to anticipate such an event at the time of issuance.

Where an amendment or variance of a category C instrument’s terms and conditions affects its recognition as capital available under this guideline, such amendment or variance will only be permitted with the prior approval of the AMF⁹.

Insurers are permitted to “re-open” offerings of capital instruments to increase the principal amount of the original issuance provided that call options will only be exercised, with the prior approval of the AMF, on or after the fifth anniversary of the closing date of the latest re-opened tranche of securities.

Defeasance options may only be exercised on or after the fifth anniversary of the closing date with the prior approval of the AMF.

2.1.3.1 Amortization

⁹ Any modification of, addition to, or renewal or extension of the term of an instrument issued to a related enterprise may be subject to the provisions of the Act regarding transactions with restricted parties and with associates of directors or officers.

Category C capital instruments are subject to straight-line amortization in the final five years prior to maturity. Hence, as these instruments approach maturity, redemption or retraction, such outstanding balances are to be amortized based on the following schedule:

<u>Years to Maturity</u>	<u>Included in Capital</u>
<u>5 years or more</u>	<u>100%</u>
<u>4 years and less than 5 years</u>	<u>80%</u>
<u>3 years and less than 4 years</u>	<u>60%</u>
<u>2 years and less than 3 years</u>	<u>40%</u>
<u>1 year and less than 2 years</u>	<u>20%</u>
<u>Less than 1 year</u>	<u>0%</u>

For instruments issued prior to January 1, 2015, where the terms of the instrument include a redemption option that is not subject to prior approval of the AMF and/or holders' retraction rights, amortization should begin five years prior to the effective dates governing such options. For example, a 20-year debenture that can be redeemed at the insurer's option at any time on or after the first 10 years would be subject to amortization commencing in year 5. Further, where a subordinated debt was redeemable at the insurer's option at any time without the prior approval of the AMF, the instrument would be subject to amortization from the date of issuance. For greater certainty, this would not apply when redemption requires the AMF's approval as is required for all instruments issued pursuant to the qualifying criteria found in Appendix 3.

Amortization should be computed at the end of each fiscal quarter based on the "years to maturity" schedule above. Thus, amortization would begin during the first quarter that ends within five calendar years to maturity. For example, if an instrument matures on October 15, 2020, 20% amortization of the issue would occur on October 16, 2015 and be reflected in the December 31, 2015 regulatory return. An additional 20% amortization would be reflected in each subsequent December 31 return.

- ~~a. accumulated net after-tax foreign currency gains and losses, net of hedging activities;~~
- ~~• accumulated net after-tax unrealized gains (losses) on share of other comprehensive income on non-qualifying subsidiaries, associates and joint ventures;~~
- ~~• accumulated other comprehensive income (loss) on remeasurements of defined benefit pension plans.~~
- ~~• subordinated indebtedness and preferred shares whose redemption is subject to the AMF's approval:

 - ~~a. preferred shares treated as debt under CGAAP, where they are long term;~~
 - ~~b. all indebtedness of the insurer that, by its terms, provides that the indebtedness will, in the event of the insolvency or winding-up of the insurer, be subordinate to all policy liabilities of the insurer and all other liabilities, except those that by their terms, rank equally with or subordinate to such indebtedness.~~~~

2.1.4 Consolidated Qualifying Non-controlling Interests:

Insurers ~~will generally be~~ permitted to include in capital available, qualifying non-controlling interests in subsidiaries that are consolidated for MCT purposes, provided that:

- the capital instruments meet the qualifying criteria under category A, B and C;
- the capital in the subsidiary is not excessive in relation to the amount necessary to carry on the subsidiary's business; and
- the level of capitalization of the subsidiary is comparable to that of the insurer as a whole;

If a subsidiary issues capital instruments for the funding of the insurer or that are substantially in excess of its own requirements, the terms and conditions of the issue, as well as the intercompany transfer, must ensure that investors are placed in the same position as if the instrument were issued by the insurer directly in order for it to qualify as capital available upon ~~on~~ consolidation. This can only be achieved by the subsidiary using the proceeds of the issue to purchase a similar instrument from the insurer. Since subsidiaries cannot buy shares in the insurer, it is likely that this treatment will only be applicable to the subordinated debt. In addition, to qualify as capital for the consolidated entity, the debt held by third parties cannot effectively be secured by other assets, such as cash, held by the subsidiary.

2.2 Capital Composition Limits

The inclusion of capital instruments qualifying under category B and category C criteria is subject to the following limits:

- the sum of capital instruments meeting the qualifying criteria under category B and category C will not exceed 40% of total capital available, excluding accumulated other comprehensive income;
- capital instruments meeting the qualifying criteria under category C will not exceed 7% of total capital available, excluding accumulated other comprehensive income.

Category B and category C capital exceeding the allowable limits will be subject to the following treatment for capital available purposes:

- in cases where capital instruments qualifying under one of either category B or C exceed the limits, the capital in excess of the limits will not be considered in the calculation of capital available. In cases where capital instruments both under category B and category C are in excess of the prescribed limits, the greater value of the two excess amounts will be excluded from capital available. In doing so, P&C insurers must first fully exclude excess capital under category C, followed by excess capital under category B;
- under certain exceptional circumstances and subject to the AMF's approval, an insurer may be permitted to continue to include such excess amounts in capital available temporarily, upon providing the AMF with a satisfactory plan outlining the company's strategy to achieve compliance with the limits as soon as possible. Typically, only those

excesses arising after issuance and as a result of operating losses or extraordinary events beyond the control of management will normally be eligible for temporary inclusion in capital available. In most other circumstances, for example, excesses resulting from:

- purchases or redemptions of capital instruments;
- discretionary dividend payments;
- new issuances of non-common capital instruments within the same fiscal quarter; or
- foreseeable events;

would generally not qualify for inclusion in capital available.

2.32 Deductions/Adjustments

2.32.1 Deductions

The following amounts ~~are~~ must be deducted from the capital available:

- interests in non-qualifying subsidiaries, ~~and~~ associates and joint ventures in which the insurer holds more than a 10% ownership interest (reference section 2.4);
- ~~interests in joint ventures with more than a 10% ownership;~~
- loans to, or other debt instruments issued to non-qualifying subsidiaries, associates and joint ventures in which the insurer holds with more than a 10% ownership interest which are considered as capital (reference section 2.4);
- amounts receivable and recoverable from unregistered reinsurance agreements to the extent that they are not covered by amounts payable to assuming reinsurers or by guarantee instruments from assuming reinsurers (reference section 4.3.23.4.2);
- self-insured retentions (“SIR”), included in other recoverables on unpaid claims, where the AMF requires acceptable collateral to ensure collectability of recoverables, and no collateral has been received (reference section 4.4.3.5);
- the earthquake premium reserve (“EPR”) not used as part of financial resources to cover earthquake risk exposure (reference section 3.6.1);
- deferred policy acquisition expenses (“DPAE”) associated with accident and sickness business, other than those arising from commissions and premium taxes that are not eligible for either the 0% capital factor or the 35% capital factor;¹⁰

¹⁰ The methodology for calculating insurance risk margin for accident and sickness business will be revised at a future date. The current methodology where risk factors are applied to unearned premiums necessitates a full deduction from capital of DPAE – other, and a capital requirement for DPAE – commissions (reference section 4.7.1).

- accumulated other comprehensive income on cash flow hedges. The amount of cash flow hedge reserve that relates to the hedging of items that are not fair valued on the balance sheet (including projected cash flows) must be derecognized in the calculation of capital available. This includes items that are not recognized on the balance sheet but excludes items that are fair valued on the balance sheet. Positive amounts should be deducted from capital available and negative amounts should be added back. This treatment specifically identifies the element of the cash flow hedge reserve that is to be derecognized for prudential purposes. It removes the element that gives rise to artificial volatility in capital available, as in this case the reserve only reflects one half of the picture (the fair value of the derivative, but not the changes in fair value of the hedged future cash flow);
- net defined benefit pension plan fund surplus assets and liabilities.; For each defined benefit pension fund that is in a surplus position and reported as an asset on the insurer's balance sheet, the amounts reported as a surplus asset on the balance sheet must be deducted from capital available, net of any associated deferred tax liability ("DTL") that would be extinguished if the asset becomes impaired or derecognized under the relevant accounting standards, and net of any amount of available refunds of defined benefit pension plan fund surplus assets to which the insurer has unrestricted and unfettered access. Insurers can only reduce this deduction by an amount of available refunds of defined benefit pension plan fund surplus assets if they obtain prior written supervisory authorization from the AMF¹¹;
- net after-tax impacts of shadow accounting if the insurer has elected to use the shadow accounting option within International Financial Reporting Standards ("IFRS");
- deferred tax assets ("DTAs") except for those eligible for the 10% risk factor, must be deducted from capital available. DTAs may be netted with associated DTLs only if the DTAs and DTLs relate to taxes levied by the same taxation authority and offsetting is permitted by the relevant taxation authority¹². The DTLs permitted to be netted against DTAs must exclude amounts that have been netted against the deduction of goodwill, intangibles and defined benefit pension plan assets, and must be allocated on a pro rata basis between DTAs that are to be deducted in full and DTAs that are subject to the 10% risk factor (reference section 5.1.2)that are not eligible for the 0% capital factor;
- accumulated net after-tax unrealized gains (losses) that have resulted from changes in the fair value of a P&C insurer's financial liabilities that are due to changes arising from changes in the insurer's own credit risk must be deducted from capital available. The offsetting between valuation adjustments arising from the insurer's own credit risk and those arising from its counterparties' credit risk is not permitted.
- goodwill and other intangible assets;

¹¹ To obtain the AMF written supervisory authorization, the insurer must demonstrate, to the AMF's satisfaction, that it has clear entitlement to the surplus and that it has unrestricted and unfettered access to the surplus pension assets including, among other things, having obtained an acceptable independent legal opinion and the prior authorization from the pension plan members and the pension regulator, where applicable.

¹² This does not permit offsetting of DTAs across provinces.

- goodwill related to consolidated subsidiaries and subsidiaries deconsolidated for regulatory capital purposes must be deducted from capital available. The full amount is to be deducted net of any associated DTL that would be extinguished if the goodwill becomes impaired or derecognized under relevant accounting standards;
- all other intangible assets¹³ must be deducted from capital available. This includes intangible assets related to consolidated subsidiaries and subsidiaries deconsolidated for regulatory capital purposes. The full amount is to be deducted net of any associated DTL that would be extinguished if the intangibles assets become impaired or derecognized under relevant accounting standards.;

- investments in own shares (treasury stock). All of an insurer's investments in its own common shares, whether held directly or indirectly, must be deducted from capital available (unless already derecognized under IFRS). In addition, any own stock that the insurer could be contractually obliged to purchase should be deducted from capital available;
- reciprocal cross holdings in the common shares of insurance, banking and financial entities (e.g. Insurer A holds shares of Insurer B and Insurer B in return holds shares of Insurer A), also known as back-to-back placements, that are designed to artificially inflate the capital position of institutions must be fully deducted from capital available.
- other assets, as defined (reference section 3.4), in excess of 1% of total assets;

~~self-insured retentions ("SIR"), included in other recoverables on unpaid claims, where the AMF requires acceptable collateral to ensure collectability of recoverables, and no collateral has been received (reference section 4.4).~~

No asset factor is applied to items that are deducted from capital available.

2.32.2 Adjustments

The following amounts are reversed from the total of capital available:

- own-use property valuations¹⁴:
 - for own-use property accounted for using the cost model and where the deemed value of the property was determined at conversion to the IFRS by using fair value, unrealized after tax fair value gains (losses) must be reversed from the insurer's reported retained earnings for capital adequacy purposes. unrealized fair value gains (losses) reflected in retained earnings at conversion to IFRS (cost model). The amount determined at conversion is an on-going deduction from capital available and can only be changed as a result of a sale of own-use properties (owned at the time of IFRS conversion) and the resulting realization of actual gains (losses);

¹³ This includes computer software intangibles.

¹⁴ No adjustments are required for "investment properties," as fair value gains (losses) are allowed for capital purposes.

- accumulated net after tax revaluation losses in excess of gains accounted for using the revaluation model must be reversed from that are reflected in retained earnings. Net after tax revaluation gains must be reversed from accumulated other comprehensive income included in capital available for accounting purposes (revaluation model).

- ~~accumulated net after tax fair value gains (losses) arising from changes in an insurer's own credit risk for the insurer's financial liabilities that are classified as held for trading.~~

~~2.2.3 Transition Measures for IAS 19 changes~~

~~Insurers may elect to phase-in the initial impact on capital available of adopting the revisions to IAS 19 "Employee Benefits", effective for fiscal years beginning on or after January 1, 2013, related to net defined benefit pension plan liabilities (assets), including the related change in this guideline that has for effect to include in capital available the accumulated other comprehensive income (loss) on remeasurements of defined benefit pension plans. The amount subject to phase-in is the combined impact on capital available of:~~

- ~~the impact on equity resulting from the adoption of the revisions to IAS 19 effective on or after January 1, 2013; and~~
- ~~the inclusion of the ending balance in the accumulated other comprehensive income (loss) on remeasurements of defined benefit pension plan account on the day prior to the effective date of the revisions to IAS 19.~~

~~The phase-in will be made on a straight-line basis over the phase-in period. The phase-in period begins on the effective date of the revisions to IAS 19 and must be completed by the earliest quarter-end occurring on or after December 31, 2014. If an insurer elects a phase-in, it will be reflected via adjustments to accumulated other comprehensive income (loss) on remeasurements of defined benefit pension plans (phase-in) reported in the MCT. The election to phase-in is irrevocable.~~

2.43 Interests in and Loans to Subsidiaries, Associates, Joint Ventures and Limited Partnerships

The equity method of accounting is used for all interests in non-qualifying subsidiaries, associates and joint ventures. These interests remain unconsolidated for MCT purposes.

2.43.1 Qualifying Consolidated Subsidiaries

The assets and liabilities of these subsidiaries are fully consolidated in the insurer's regulatory financial statements and are included in the calculation of capital available and required; they are therefore subject to asset-risk factors and liability margins in the insurer's MCT.

2.43.2 Joint Ventures with Less Than or Equal to 10% Ownership Interest

Where an insurer holds less than or equal to 10% ownership interest in a joint venture, the investment is ~~included in net deducted from~~ capital available. The investment ~~is reported under capital required for equity risk and~~ is subject to the ~~asset-risk~~ factor applicable to ~~investments in~~ common shares ~~(reference section 4.3)~~.

2.43.3 Non-qualifying Subsidiaries, Associates and Joint Ventures with More Than a 10% Ownership Interest

Interests in non-qualifying subsidiaries, associates and joint ventures ~~in which the insurer holds with~~ more than a 10% ownership interest are excluded from capital available. Loans to, or other debt instruments issued to these entities are also excluded from capital available of the insurer if they are considered as capital in the entity.

Loans to, or other debt instruments issued to these entities, that are not considered as capital in the entity, are subject to a ~~an asset-risk~~ factor of ~~35~~45% (or higher for higher risk loans). Insurers should contact the AMF to discuss higher ~~asset-risk~~ factors.

Receivables from these entities will attract a ~~capital factor~~ risk factor of 45% or 810% depending on how long the balances are outstanding (reference section ~~3.45.1.2~~).

2.34.4 Limited Partnerships

Investments of the insurer held and managed by a limited partnership on behalf of the insurer are treated as direct investments of the insurer, provided that the insurer can demonstrate to the AMF's satisfaction that these investments are not used to capitalize such a partnership under the laws and regulations governing it. Consequently, the capital required for such investments is calculated using a look-through approach to the underlying assets held by the limited partnership, by applying the ~~capital factor~~ risk factors in section ~~3.45.1~~ to the limited partnership investments.

Chapter 43. Policy Liability Insurance Risks

43.1 Description of Insurance Risks ~~for Policy Liabilities~~

Insurance risk is the risk arising from the potential for claims or payouts to be made to policyholders or beneficiaries. Exposure to this risk results from the present value of losses being higher than the amounts originally estimated.

Insurance risk includes uncertainties around:

- the ultimate amount of net cash flows from premiums, commissions, claims, and related settlement expenses;
- the timing of the receipt and payment of these cash flows.

~~This~~ The “insurance risk” component reflects the insurer’s consolidated risk profile by its individual classes of insurance and results in specific margin requirements ~~on policy liabilities for insurance risk~~. For the MCT, the risk associated with ~~policy liabilities~~ insurance exposure is divided into four parts:

- reserving risk associated with variation in claims provisions (unpaid claims);
- underwriting risk including catastrophe risk, other than earthquakes and nuclear, (premium liabilities); ~~possible inadequacy of provisions for unearned premiums;~~
- ~~possible inadequacy of provisions for premium deficiencies~~ earthquake and nuclear risks;
- ~~occurrence of catastrophes (earthquake and other)~~ risk associated with unregistered reinsurance.

3.2 Diversification Credit within Insurance Risk

The risk factors for each line of business contain an implicit diversification credit based on the assumption that insurers have a well-diversified portfolio of risks for a given portfolio of business.

4.23.3 Margins for Unearned Premiums, Unpaid Claims and Premium Deficiencies Liabilities

Given the uncertainty that ~~balance sheet~~ provisions will be sufficient to cover underlying liabilities, margins are added to cover the potential shortfall. ~~The margins have been established in order to ensure a balance between the recognition of varying risks associated with different classes of insurance and the administrative necessity to minimize the test’s complexity.~~

From the AMF's perspective, these margins are included to take into account possible abnormal negative variations in the provision amounts, given the fact that the margins added by actuaries in their valuations are primarily intended to cover expected variations.

~~Margins on unpaid claims are applied~~ calculated by class of insurance, by multiplying to the net amount at risk (i.e., net of reinsurance, salvage and subrogation, and ~~SIR~~ self-insured retentions) less the provision for adverse deviations ("PfAD"), by the applicable risk factors.

Margins ~~for on-earned~~ premiums liabilities are ~~calculated~~ applied by class of insurance, ~~by multiplying to~~ the net amount at risk, which is after deducting reinsurance recoverables and the PfAD, by the applicable risk factors. The ~~unearned~~ premiums liability risk factors are ~~margin is~~ applied to the greater of the net ~~unearned~~ premium liabilities ~~under 50~~ 30% of the net written premiums in the past 12 months.

~~Margins on unpaid claims are applied by class of insurance to the net amount at risk (i.e., net of reinsurance, salvage and subrogation, and self-insured retentions) less the provision for adverse deviations ("PfAD")~~

The ~~margins~~ insurance risk factors are as follows:

Class of Insurance	<u>Margin-on Unearned Premiums Risk Factor Unpaid Claims</u>	<u>Margin-on Risk Factor Unpaid Claims Premium Liabilities</u>
Personal property and commercial property	<u>815</u> %	<u>520</u> %
<u>Commercial property</u>	<u>10</u> %	<u>20</u> %
<u>Aircraft</u>	<u>20</u> %	<u>25</u> %
Automobile – Liability and personal accident	<u>108</u> %	<u>150</u> %
<u>Automobile – Personal accident</u>	<u>10</u> %	<u>15</u> %
Automobile – Other	<u>815</u> %	<u>205</u> %
<u>Boiler and machinery</u>	<u>15</u> %	<u>20</u> %
<u>Credit</u>	<u>20</u> %	<u>25</u> %
<u>Credit protection</u>	<u>20</u> %	<u>25</u> %
<u>Fidelity</u>	<u>20</u> %	<u>25</u> %
<u>Hail</u>	<u>20</u> %	<u>25</u> %
<u>Legal expense</u>	<u>25</u> %	<u>30</u> %
Liability	<u>825</u> %	<u>1530</u> %
<u>Other approved products</u>	<u>20</u> %	<u>25</u> %
<u>Surety</u>	<u>20</u> %	<u>25</u> %
<u>Title</u>	<u>15</u> %	<u>20</u> %
<u>Mortgage</u>	<u>Consult the AMF</u>	
<u>Marine</u>	<u>20</u> %	<u>25</u> %
Accident and sickness	See Appendix <u>24</u>	See Appendix <u>24</u>
All other classes	<u>8</u> %	<u>15</u> %

~~A margin of 8% applies to premium deficiencies.~~

4.33.4 Risk Mitigation and Risk Transfer Mechanisms - Reinsurance

The risk of default for amounts recoverables from reinsurers arises from both credit and actuarial risk. Credit risk relates to the risk that the reinsurer will fail to pay the ceding insurer what it is owed. Actuarial risk relates to the risk associated with the mis-assessmentmenting of the amount of the required provision.

4.33.4.1 Registered Reinsurance

The ~~capital factor~~risk factor applied to unpaid claims and unearned premiums recoverables from registered reinsurance agreements is treated as a combined weight under the MCT, reflecting both the credit risk and the risk of variability or insufficiency of unpaid claims and unearned premiums.

The registered reinsurance agreement ~~capital factor~~risk factors are as follows:

Balance Sheet Asset	<u>From</u> Non-Associated Reinsurer	<u>From</u> Associated Reinsurer
Insurance receivables	0. 75 %	0%
Unearned premiums recoverable	20 .5%	0%
Unpaid claims recoverable	2. 5 %	0%

4.33.4.2 Unregistered Reinsurance

4.33.4.2.1 Deduction from Capital Available

Rather than being applied a ~~capital factor~~risk factor to cover the risk of default of the reinsurers, amounts receivable and recoverable from unregistered reinsurance agreements, as reported on the balance sheet, are deducted from capital available to the extent that they are not covered by amounts payable to assuming reinsurers (including funds withheld) or by guarantee instruments from assuming reinsurers. Amounts payable to assuming reinsurers may be deducted from amounts receivable and recoverable only where there is a legal and contractual right of offset. Insurers are not to include any amounts payable to assuming reinsurers that are associates or non-qualifying subsidiaries.

The deduction is calculated on page 70.38 of the P&C-1 form, ~~and reported on the line "Assets with a Capital Requirement of 100%" on page 30.70 (section 2.2.1).~~ The amount is the sum, for each of the unregistered reinsurance agreements, of the following calculation where the result is positive:

$$A + B + C - D - E - F$$

where:

- A: is the amount of unearned premiums ceded to the assuming reinsurer;
- B: is the amount of outstanding losses recoverable from the assuming reinsurer;
- C: is the amount of receivables from the assuming reinsurer;
- D: is the amount of payables to the assuming reinsurer (~~for insurers holding a charter issued by the province of Québec or by another Canadian jurisdiction;~~ only payables under unregistered reinsurance agreements to non-associated and non-subsidiary qualifying unregistered reinsurers are may be included);
- E: is the amount of non-owned deposits or other assets held as security from assuming reinsurer, as a guarantee instrument for reinsurance;
- F: is the amount of acceptable letters of credit held as security from assuming reinsurer.

4.33.4.2.2 Margin Required

The margin for unregistered reinsurance is calculated on page 70.38 of the P&C form and reported on the “Reinsurance Ceded to Unregistered Insurers” line on page 30.70 of the form. The margin is 150% of the ceded unearned premiums under unregistered reinsurance agreements and of the outstanding losses recoverable from such agreements. The margin requirement for each unregistered reinsurance agreement may be reduced to a minimum of 0 by payables to the reinsurer, letters of credit and by deposits held as security that are in excess of the amounts receivable and recoverable from unregistered reinsurance agreements. ~~The amount of letters of credit and deposits that are in excess must be divided by 1.5 before being applied to the margin.~~

4.33.4.2.3 Guarantee Instruments

A ceding insurer is given credit for unregistered reinsurance where the insurer obtains and maintains a valid and enforceable guarantee interest that has priority over any other security interest in assets of an unregistered reinsurer that are held in Canada, to secure the payment to the ceding insurer by the reinsurer of the reinsurer's share of any loss or liability for which the reinsurer is liable under the reinsurance agreement.

The assets-guarantee instruments used to obtain credit for a specific unregistered reinsurance agreement must materially reduce the risk arising from the credit quality of the reinsurer. In particular, the guarantee instruments assets used may not be related party obligations of the unregistered reinsurer (i.e. obligations of the reinsurer itself, its parent, or one of its subsidiaries or associates). With respect to the above three sources available to obtain credit, this implies that:

- to the extent that a ceding insurer is reporting obligations due from a related party of the reinsurer as assets in its annual return, the ceding insurer is precluded from taking credit for funds held to secure payment from ~~an the~~ unregistered reinsurer;
- reinsurer's assets located in Canada in which a ceding insurer has a valid and perfected first priority security interest under applicable law, may not be used to obtain credit if they are obligations of a related party of the unregistered reinsurer;

- a letter of credit is not acceptable if it has been issued by a related party of the unregistered reinsurer.

Guarantee instruments must be available to the insurer for a period of not less than the remaining term of the ceded liabilities in order to be valid towards obtaining credit for unregistered reinsurance. In cases where an arrangement contains a renewal provision for the ceding insurer to maintain a guarantee for a part or the whole of the remaining term of ceded liabilities (e.g. additional fees or higher interest rate), the renewal provision should be included when determining the ceded reserves.

Letters of credit held as guarantee against unregistered reinsurance are considered a direct credit substitute and are subject to risk factors based on the credit rating of the issuing/confirming bank and the term of ceded liabilities ~~a 0.5% capital factor~~ (reference ~~chapter 7~~ section 5.2). Where a letter of credit is issued or confirmed by a related enterprise of a ceding insurer, no reduction in capital required is permitted.

Guarantee instruments other than letter of credits, such as non-owned deposits, held as guarantee against unregistered reinsurance, are subject to the same ~~capital factor~~ risk factors as those applied to similar assets owned by the insurer (reference section 3.45.1).

~~The capital requirement for both letters of credit and other guarantee instruments is reported under "Risks Associated with Structured Settlements, Letters of Credit, Derivatives and Other Exposures". Appendix 5 can be used to calculate the total capital requirement for structured settlements, letters of credit, derivatives and other exposures.~~

Capital requirements for guarantee instruments associated with unregistered reinsurance are calculated on an aggregate basis using applicable ~~capital factor~~ risk factors, on the total amount of letters of credit and other guarantees from ~~all each~~ reinsurers. However, letters of credit and other guarantees held that ~~exceed are greater than 100% of~~ the unregistered reinsurance requirements are considered excess guarantees and are not subject to ~~a capital factor~~ requirements. Where appropriate, the total amount of capital required for the guarantees is pro-rated in order to exclude capital otherwise required on the excess portion of guarantees (~~Refer to examples 4-1 and 4-2~~).

Two steps are required to compute excess guarantees and arrive at a reduction in capital required for excess guarantees.

Example 4-1 Step 1: Computation of excess guarantees

Reinsurance Ceded Under Unregistered Reinsurance Agreements	Amount (\$)
Unearned premiums ceded to assuming reinsurer	100
Outstanding losses recoverable from assuming reinsurer	500
150% margin on unearned premiums and outstanding losses recoverable	6090
Receivable from assuming reinsurer	40

Payable to assuming reinsurer ¹⁵	(20)
Unregistered reinsurance exposure	<u>680710</u>
Guarantees required to reduce margin required to 0 (500 + 100) x 115% + 40 - 20	710
Non-owned deposits	1,000
Letters of credit	100
Total guarantees	1,100
Excess guarantees (no capital required on this amount) 1,100 - 710	390

The amount of excess guarantees should be calculated separately for each individual reinsurer and then added together.

Example 4-Step 2: ~~r~~Reduction in capital required for excess guarantees

Using the above example, the ratio of 0.35 (390/1,100) should be applied to the total amount of capital required on guarantees, in order to calculate the capital requirement on guarantees excluding the excess portion.

¹⁵ Only payables to assuming reinsurers that are non-associates or non-subsiaries are included.

The calculation is provided in the following table.

	Guarantee amount	Capital factor Risk factor	Total capital required	Proportional allocation of excess guarantees	Reduction in capital required for excess guarantees
	(01)	(02)	(03)=(01)x(02)	(04)	(05)=(03)x(04)
Letters of credit <u>(AA rating ≤1 year)</u>	\$100	0. 25 0%	\$0. 25 0		
Non-owned deposits (AAA bonds ≤1 year)	\$500	0.25%	\$1.25		
Non-owned deposits (AA bonds >1 year ≤5 years)	\$500	1.00%	\$5.00		
Total	\$1,100		\$6. 75 0	0.35	\$2. 36 28

The capital requirements for letters of credit and guarantees other than letters of credit, less the excess, are reported as part of capital required for credit risk (reference chapter 5).

4.33.4.2.4 Letters of Credit

The limit on the use of letters of credit to obtain capital credit for unregistered reinsurance is 30% of ceded unearned premiums under unregistered reinsurance agreements and of the outstanding losses recoverable from such agreements. This limit is applied in the aggregate and not against individual reinsurance exposures.

~~4.3.2.5 Funds Held as Security against unregistered reinsurance~~

~~Cash and securities received to secure payment from unregistered reinsurance agreements that have been co-mingled with the insurer's own funds should be reported on the insurer's balance sheet in the appropriate asset categories and will be subject to the corresponding capital factors. Details of these deposits must be reported in the unregistered reinsurance exhibit, page 70.38 of the P&C-1 Annual Return, in the payable to assuming insurer column.~~

4.33.4.2.56 Non-Owned Deposits from Reinsurers Received as Security

Deposits from reinsurers received under unregistered reinsurance agreements and that are “not owned” by the insurer, including deposits held in trust on behalf of reinsurers, are not to be reported on the insurer's balance sheet. Details of these deposits must also be reported in the unregistered reinsurance exhibit, page 70.38 of the P&C-1 Annual Return form.

Non-owned deposits held as security on behalf of an unregistered assuming reinsurer must be valued at market value as at the end of the statement year, including the amount of investment income due and accrued respecting these deposits.

3.4.2.6 Funds Held as Security against unregistered reinsurance

Cash and securities received to secure payment from unregistered reinsurance agreements that have been co-mingled with the insurer's own funds should be reported on the insurer's balance sheet in the appropriate asset categories and will be subject to the corresponding risk factors. Details of these deposits must be reported in the unregistered reinsurance exhibit, page 70.38 of the P&C form, in the payable to assuming insurer column.

4.43.5 Self-Insured Retentions

Self-insured retention (“SIR”) represents the portion of a loss that is payable by the policyholder. In some cases, SIRs may be included in the policy declaration or in an endorsement to the policy, stipulating that the policy limit applies in excess of the SIR.

To admit SIRs recoverable for statutory-regulatory capital purposes, the AMF must be satisfied with the collectability of recoverables, and may require collateral to ensure collectability. For example, collateral may be required when it is deemed that there is an excessive concentration of SIRs owed by any one debtor. ~~SIRs amounts not admitted (deducted from capital available) must be reported on line 88, page 30.71.~~

Letters of credit and other acceptable securities may be used as collateral for SIRs. Collateral used may not be related party obligations of the policyholder (i.e. obligations of the policyholder itself, its parent, or one of its subsidiaries or associates); in such cases, no reduction in capital required is permitted.

Letters of credit for SIRs are considered a direct credit substitute and are subject to a ~~0.5% capital factor~~ risk factor based on the credit rating of the issuing/confirming bank and the term of ceded liabilities (subject to the provision for excess guarantees) (reference section 5.2). (reference chapter 7). ~~Where a letter of credit is issued or confirmed by a related enterprise of a ceding insurer, no reduction in capital required is permitted. Capital factor~~ Risk factors for collateral other than letters of credit are the same as those applied to similar assets owned by the insurer (reference section 3.45.1).

4.53.6 Catastrophes

3.6.1 Earthquake Risk Exposure

Insurers must refer to the AMF's *Sound Management and Measurement of Earthquake Exposure Guideline* (the "Earthquake Guideline") for details on the AMF's expectations relating to P&C insurers' earthquake exposure risk management and the related definitions. The present guideline outlines the framework for quantifying the earthquake risk exposure for regulatory capital purposes and assessing insurers' capacity and financial preparedness to meet contractual obligations that may arise from a major earthquake.

The amount of earthquake reserves includes the Earthquake Premium Reserve ("EPR") and the Earthquake Reserve Component ("ERC") and is added to total capital requirements for the purposes of the MCT as target capital requirement. The earthquake reserve is to be set using the following formula:

$$\text{Earthquake Reserves} = (\text{EPR} + \text{ERC}) \times 1.25$$

where:

$$\text{ERC (section 3.6.1.3)} = \frac{\{\text{Earthquake Risk Exposure (section 3.6.1.1)}\} - \{\text{Financial Resources (section 3.6.1.2)}\}}{\geq 0}$$

The ERC must always be greater than or equal to 0.

In the case where the EPR is not used as part of financial resources to cover the earthquake risk exposure, i.e. the insurer has enough financial resources to cover its earthquake risk exposure without the voluntary reserve, the EPR can be deducted from capital available instead of being added to total capital requirements.

3.6.1.1 Measurement of Earthquake Risk Exposure

The earthquake Probable Maximum Loss ("PML") is the threshold dollar value of losses beyond which losses caused by a major earthquake are unlikely. Gross PML, which is the PML amount **after** deductibles but **before** catastrophic and other reinsurance protection, is used for calculating earthquake risk exposure for regulatory purposes. In this section, PML refers to a dollar amount¹⁶ that includes adjustments for data quality, non-modelled exposures and model uncertainty as outlined in the Earthquake Guideline.

Model approach

- Insurers with material exposure to earthquake risk are required to use models to estimate their PML. Earthquake 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. Whichever is used, it must be to the AMF's satisfaction, as explained in the Earthquake Guideline;

¹⁶ The PML amount corresponds to the worldwide exposure.

- the AMF expects that insurers continue to progress to a 500 year PML from earthquakes, as defined below, by 2022. Consequently, the AMF expects an insurer to meet a test of financial preparedness for a 500 year return period country-wide earthquake event by no later than the end of fiscal year 2022. This requirement can be determined as follows:

$$\text{Country-wide PML500} = (\text{East Canada PML500}^{1.5} + \text{West Canada PML500}^{1.5})^{\frac{1}{1.5}}$$

where:

East Canada PML500 refers to a one in 500 year Eastern Canada event, which represents the 99.8th percentile of the exceeding probability curve plus appropriate adjustments for data quality, model uncertainty, non-modelled business etc., using exceeding probability curves based only on earthquake risk exposure in Eastern Canada;

West Canada PML500 refers to a one in 500 year Western Canada event, which represents the 99.8th percentile of the exceeding probability curve plus appropriate adjustments for data quality, model uncertainty, non-modelled business etc., using exceeding probability curves based only on earthquake risk exposure in Western Canada.

- recognizing the impact resulting from the new country-wide PML500 requirement, insurers may continue to phase-in their increased earthquake risk exposure until 2022 using the following formula:

$$\text{Country-wide PML (Year)} = \frac{\text{Country-wide PML500} \times (\text{Year} - 2014)/8 + \text{MAX}[\text{East Canada PML420}, \text{West Canada PML420}]}{(2022 - \text{Year})/8}$$

where:

Year is the current reporting year (subject to a maximum of 2022);

East Canada PML420 refers to a one in 420 year Eastern Canada event, which represents the 99.76th percentile of the exceeding probability curve plus appropriate adjustments for data quality, model uncertainty, non-modelled business etc., using exceeding probability curves based only on earthquake risk exposure in Eastern Canada;

West Canada PML420 refers to a one in 420 year Western Canada event, which represents the 99.76th percentile of the exceeding probability curve plus appropriate adjustments for data quality, model uncertainty, non-modelled business etc., using exceeding probability curves based only on earthquake risk exposure in Western Canada.

Standard approach

- Insurers should use the standard formula for calculating their PML if:

- the insurer does not use an earthquake model for calculating its PML; or
- an earthquake risk exposure estimation technique or model is not to the AMF's satisfaction.
- the standard formula is defined as:

$$\text{Country-wide PML} \quad \equiv \quad \text{MAX (East Canada PTIV, West Canada PTIV)}$$

where:

PTIV: is the property total insured value for earthquake risk exposure after applicable policyholder deductibles, which includes building, contents, outbuildings, additional living expenses and business interruption.

3.6.1.2 Financial Resources

An insurer must have adequate financial resources to cover its earthquake risk exposure calculated in section 3.6.1.1. Financial resources that can be used to support the insurer's earthquake risk exposure include:

- capital & surplus:
 - insurers can count up to a maximum of 10% of capital and surplus as part of their financial resources to cover their earthquake risk exposure. This maximum limit is subject to the AMF's discretion and can be lowered to an amount less than 10% of capital and surplus;
 - the amount of capital and surplus corresponds to a maximum of 10% of total equity as at the end of the reporting period being filed.
- earthquake premium reserve:
 - the EPR is the voluntary accumulation of earthquake premiums. This amount must not exceed the country-wide PML¹⁷;
 - in the case where the earthquake coverage premium is implicitly included in an overall policy premium, the insurer should be able to demonstrate the reasonableness of the premium allocation specifically attributed to earthquake coverage. As an example, in the case of catastrophic reinsurance coverage not specific to earthquake risk, an allocation of the premium amount must be made and the reasonableness of the reinsurer's premium allocation must be demonstrated;
 - any earthquake premium contributed to the EPR must remain in the EPR unless there is a material decrease in the exposure. The AMF reserves the right to require information on any decrease in the ERC;

¹⁷ Refer to the *Taxation Act* (R.S.Q. 1985, C. 1) for the annual contribution limit.

- should an earthquake occur and trigger claims, insurers would establish an unpaid claims provision as well as a provision for claims adjustment expenses. The EPR component would be reduced by an amount equal to the claims reserves;
 - any reduction in the EPR should be brought back into unappropriated surplus immediately;
 - the EPR is a component of the reserves amount reported on the balance sheet.
- reinsurance coverage;
 - the estimated reinsurance coverage available should be based on reinsurance in force on the day immediately following the end of the financial reporting period and should be equal to an amount of reinsurance collectable for a loss of the size of the PML, net of retention (e.g., policies in force on July 1 for MCT calculations as on June 30).
- capital market financing
 - prior supervisory approval from the AMF is required before these instruments can be recognized as a financial resource in the calculation of the earthquake risk formula. Refer to the Earthquake Guideline for additional information.

3.6.1.3 Earthquake Reserve Component

The ERC is an additional component used to cover an insurer's earthquake risk exposure not covered by the financial resources. The formula to compute the ERC is as follows:

$$\text{ERC} \quad \equiv \quad \{ \text{Country-wide PML500} \times (\text{Year} - 2014)/8 + \text{MAX} [\text{East Canada PML420, West Canada PML420}] \times (\text{2022} - \text{Year})/8 \} - \text{capital and surplus} - \text{reinsurance coverage} - \text{capital market financing} - \text{EPR}$$

- should an earthquake occur and trigger claims, insurers would establish an unpaid claims provision as well as a provision for claims adjustment expenses. The ERC component would be reduced after the EPR, by an amount equal to the claims reserves;
 - any reduction in the ERC should be brought back into unappropriated surplus immediately;
 - the ERC is a component of the reserves amount reported on the balance sheet.
- Refer to the AMF's Sound Management and Measurement of Earthquake Exposure Guideline.

4.63.7 Other Classes

3.7.1 Accident and Sickness Insurance

Accident and sickness reserves determined by actuaries in their valuations are primarily intended to cover expected variations in these requirements based on assumptions about mortality and morbidity. Margins on unearned premiums and unpaid claims for accident and sickness insurance are included in the MCT to take into account possible abnormal negative variations in actual requirements.

The unearned premiums margin is calculated by applying a factor to annual earned premiums. Generally, the factor varies with the length of the premium guarantee remaining. A margin for DPAE arising from commissions is also required and is calculated by multiplying DPAE commissions, net of an adjustment for unearned commissions, by 45%. The unpaid claims margin is calculated by applying a factor to the unpaid claims experience relating to prior years. Generally, the factor varies with the length of benefit period remaining.

A worksheet for calculating the margin required for accident and sickness business as well as instructions for completing the worksheet are included in appendices 4 and 5. The total requirement calculated on the worksheet should be included in the amount reported as the margin required for unpaid claims and premium liabilities in the MCT.

~~For this class, refer to the calculation of the margin requirement set forth in appendices 2 and 3. The amount of this margin requirement is to be included in the amount of the capital required for unearned premiums and unpaid claims (page 30.70, line 22).~~

3.7.2 Mortgage Insurance

Mortgage Insurance

Consult the AMF.

Chapter 54. ~~Interest Rate~~Market Risk

Market risk arises from potential changes in rates or prices in various markets such as for interest rates, foreign exchange rates, equities, real estate, and other market risk exposures. Exposure to this risk results from trading, investing, and other business activities, which create on- and off-balance sheet positions.

4.1 Interest Rate Risk

Interest rate risk represents the risk of economic loss resulting from market changes in interest rates and the impact on interest rate sensitive assets and liabilities. Interest rate risk arises due to the volatility and uncertainty of future interest rates.

Assets and liabilities whose value depends on interest rates are affected. ~~The i~~Interest rate sensitive assets include fixed income assets. ~~The i~~Interest rate sensitive liabilities include those for which the values are determined using a discount rate.

To compute the interest rate risk margin, a duration and an interest rate shock factor are applied to the fair value of interest rate sensitive assets and liabilities. The interest rate risk margin is the difference between the change in the value of interest rate sensitive assets and the change in the value of interest rate sensitive liabilities, taking into account the change in the value of recognized interest rate derivative contracts, as appropriate.

5.1 — General Requirements

The components used to calculate the interest rate risk margin are as follows.

45.1.1 Interest Rate Sensitive Assets

The interest rate sensitive assets to be included in the calculation of the interest rate margin requirement are those for which their fair value will change with movements in interest rates. Although certain assets, for example loans and bonds held to maturity, may be reported on the balance sheet on an amortized cost basis, their economic value, and changes in that value, are to be considered for interest rate risk margin purposes. Interest rate sensitive assets include the following:

- term deposits and other similar short-term securities (excluding cash);
- bonds and debentures;
- commercial paper;
- loans;
- mortgages (residential and commercial);

- mortgage-backed and asset-backed securities (“MBS” and “ABS”);
- preferred shares;
- interest rate derivatives held for other than hedging purposes.

Investments in mutual funds and ~~segregated funds~~ other similar assets should be viewed on a “look through” basis with regard to the underlying assets. The assets in the fund that are interest rate sensitive are to be included in the determination of the fair value of the insurer’s total interest rate sensitive assets.

Other assets, such as cash, investment income due and accrued, common shares and investment properties, are not to be included in the determination of the value of interest rate sensitive assets. Such assets are assumed for interest rate risk margin determination purposes to be insensitive to movements in interest rates.

54.1.2 Interest Rate Sensitive Liabilities

The interest rate sensitive liabilities to be included in the calculation of the interest rate risk margin ~~requirement~~ are those for which their fair value will change with movements in interest rates. The following liabilities are considered sensitive to interest rates and are to be included:

- net unpaid claims and adjustment expenses;
- net premium liabilities.

Insurer must obtain the AMF’s approval in order to be able to consider other liabilities in the calculation of the interest rate risk margin.

Net unpaid claims and adjustment expenses, which include PfAD, are net of reinsurance, salvage and subrogation, and self-insured retentions. The net premium liabilities, which also include PfAD, are those determined in a manner consistent with the valuation of policy liabilities in the Canadian Institute of Actuaries (“CIA”) standards for valuation of policy liabilities. The net premium liabilities are equal to the present value, at the balance sheet date, of cash flows on account of premium development and of the claims, expenses and taxes to be incurred after that date on account of the policies in force at that date, after reinsurance recoverables. In other words, they are the actuary’s estimate of net policy liabilities in connection with unearned premiums disclosed in the table entitled “Premium Liabilities” from the expression of opinion included in the Report on P&C insurer policy liabilities.

54.1.3 Allowable Interest Rate Derivatives

Interest rate derivatives are those for which the ~~payoffs~~ cash flows are dependent on future interest rates. They may be used to hedge a P&C insurer’s interest rate risk and as such may be recognized in the determination of the margin required for interest rate risk, subject to the conditions below.

Only plain-vanilla interest rate derivatives that clearly serve to offset fair value changes in an insurer's capital position due to changes in interest rates may be included in the interest rate risk calculation. Plain-vanilla interest rate derivative instruments are limited to the following:

- interest rate and bond futures;
- interest rate and bond forwards;
- single-currency interest rate swaps.

Other interest rate derivatives, including interest rate options, caps and floors are not considered plain-vanilla and ~~are may~~ not ~~to~~ be recognized in the determination of the interest rate risk margin ~~-requirement~~.

Insurers must understand the interest rate hedging strategies that they have in place and be able to demonstrate to the AMF, upon request, that the underlying hedges decrease interest rate risk exposure and that the addition of such derivatives does not result in overall increased risk. For example, insurers are expected to be able to demonstrate that they have defined the hedging objectives, the class of risk being hedged, the nature of the risk being hedged, the hedge horizon and have considered other factors, such as the cost and liquidity of ~~the~~ hedging instruments. In addition, the ability to demonstrate an assessment, retrospectively or prospectively, of the performance of the hedge would be appropriate. If the insurer cannot demonstrate that the derivatives result in decreased overall risk, then additional capital may be required, and insurers in this situation should contact the AMF for details.

Derivatives used for hedging an insurer's interest rate risk are subject to credit risk requirements. Refer to section 5.2 for further details.

54.1.4 Duration of Interest Rate Sensitive Assets and Liabilities

Insurers are required to calculate the duration of the interest rate sensitive assets and liabilities for the purposes of the interest rate risk capital requirement calculation. The duration of an asset or a liability is a measure of the sensitivity of the value of the asset or liability to changes in interest rates. More precisely, it is the percentage change in an asset or liability value given a change in interest rates.

The calculation of duration for an asset or liability will depend on the duration measure chosen and whether the cash flows of the asset or liability are themselves dependent on interest rates. Modified duration is a duration measure in which it is assumed that interest rate changes do not change the expected cash flows. Effective duration is a duration measure in which recognition is given to the fact that interest rate changes may change the expected cash flows.

An insurer may use either modified duration or effective duration to calculate the duration of its assets and liabilities. However, the duration methodology chosen should apply to all interest rate sensitive assets and liabilities under consideration and the same methodology ~~is to~~ must be used consistently from year to year (i.e. ~~no~~ "cherry-picking" is not permitted).

The cash flows associated with interest rate derivatives are sensitive to changes in interest rates and therefore the duration of an interest rate derivative must be determined using effective

duration. In particular, if an insurer has interest rate derivatives on its balance sheet that lie within the scope of section 54.1.3, then it must use effective duration for all of its interest rate sensitive assets and liabilities.

The portfolio duration (modified or effective) can be obtained by calculating the weighted average of the duration of the assets or the liabilities in the portfolio.

The dollar duration of an asset or liability is the change in dollar value of an asset or liability for a given change in interest rates.

54.1.4.1 Modified Duration

Modified duration is defined as the approximate percentage change in the present value of cash flows for a 100 basis point change in the annually compounded yield rate, interest rates assuming that ~~the~~ expected cash flows do not change when ~~the~~ interest rates change.

Modified duration can be written as:

$$\text{Modified duration} = \frac{1}{(1 + \text{yield}/k)} \times \frac{\sum t \times \frac{PVCF_t}{(1 + \text{yield}/k)^t} + \frac{PVCF_n}{(1 + \text{yield}/k)^n}}{k \times \text{Market Value}}$$

where:

- k : number of periods, or payments, per year (e.g. $k = 2$ for semi-annual payments and $k = 12$ for monthly payments)
- n : number of periods until maturity (i.e. number of years to maturity times k)
- yield: market value periodically compounded yield to maturity of the cash flows
- $PVCF_t$: present value of the cash flow in-period at time t discounted at the yield ~~to maturity rate~~

54.1.4.2 Effective Duration

Effective duration is a duration measure in which recognition is given to the fact that interest rate changes may change the expected cash flows. Although modified duration will give the same estimate of the percentage fair value change for an option-free series of cash flows, the more appropriate measure for any series of cash flows with an embedded option is effective duration.

Effective duration is determined as follows:

$$\text{Effective duration} = \frac{\text{Fair value if yields decline} - \text{Fair value if yields rise}}{2 \times (\text{initial price}) \times (\text{change in yield in decimal})}$$

Denoting:

- Δy : change in yield in decimal
- V_0 : initial fair value

V_- : fair value if yields decline by Δy
 V_+ : fair value if yields increase by Δy

Then, effective duration is as follows:

$$\frac{V_- - V_+}{2 \times (V_0) \times (\Delta y)}$$

54.1.4.3 Portfolio Duration

The duration of a portfolio of interest rate sensitive assets or liabilities is to be determined by calculating the weighted average of the duration of the assets or liabilities in the portfolio. The weight is the proportion of the portfolio that a security comprises. Mathematically, a portfolio's duration is calculated as follows:

$$w_1 D_1 + w_2 D_2 + w_3 D_3 + \dots + w_K D_K$$

where:

w_i : fair value of security i / fair value of the portfolio
 D_i : duration of security i
 K : number of securities in the portfolio

54.1.4.4 Dollar Fair Value Change

Modified and effective duration are related to percentage fair value changes. The interest rate risk capital requirements depend on determining the adjustment to the fair value of interest rate sensitive assets and liabilities for dollar fair value changes. The dollar fair value change can be measured by multiplying duration by the dollar fair value and the number of basis points (in decimal form). In other words:

$$\text{Dollar fair value change} = \text{duration} \times \text{dollar fair value} \times \text{interest rate change (in decimal)}$$

54.1.5 Duration of Allowable Interest Rate Derivatives

Effective duration is the appropriate measure that should be used when assets or liabilities have embedded options. For portfolios with eligible plain-vanilla interest rate derivatives, ~~since the insurer should be using effective dollar duration¹⁸ because the insurer is hedging the dollar interest rate risk exposure, it is the effective dollar duration that should be used.~~

Example 45-1: Effective dollar duration of a swap

¹⁸ Effective dollar duration is the fair value change in dollars for a unit change in the yield (per one percentage point or per one basis point).

Assuming an insurer has a longer duration for its interest rate sensitive assets and a shorter duration for its interest rate sensitive liabilities, the current dollar duration position of the insurer, prior to taking into consideration any interest rate derivatives, is effectively as follows:

$$\text{Insurer's dollar duration} = \text{dollar duration of assets} - \text{dollar duration of liabilities} > 0$$

The insurer enters into a single-currency interest rate swap in which it pays fixed-rate and receives floating-rate. The dollar duration of a swap for a fixed-rate payer can be broken down as follows:

$$\begin{aligned} \text{Effective dollar duration of a swap for a fixed-rate payer} &= \text{effective dollar duration of a floating-rate bond} - \\ &\quad \text{effective dollar duration of a fixed-rate bond} \end{aligned}$$

Assuming the dollar duration of the floater is near zero, then:

$$\begin{aligned} \text{Effective dollar duration of a swap for a fixed-rate payer} &= 0 - \text{effective dollar duration of a fixed-rate bond} \end{aligned}$$

The dollar duration of the swap position is negative; therefore, adding the swap position reduces the insurer's dollar duration of assets and moves the insurer's overall dollar duration position closer to zero.

54.1.6-2 Interest rate Risk Margin

The interest rate risk margin is determined by measuring the economic impact on the insurer of a Δy change in interest rates. ~~The AMF will phase-in the magnitude of the interest rate shock factor. Effective January 1, 2013, the Δy interest rate shock factor is 0.751.25% ($\Delta y = 0.00750125$).~~

- (A) The estimated change in the interest sensitive asset portfolio for an interest rate increase of Δy is determined as follows:

$$\begin{aligned} \text{Dollar fair value change of the interest rate sensitive asset portfolio} &= (\text{Duration of interest rate sensitive asset portfolio}) \times \Delta y \times \\ &\quad (\text{Fair value of interest rate sensitive asset portfolio}) \end{aligned}$$

- (B) The change in the interest rate sensitive liabilities for an interest rate increase of Δy is determined as follows:

$$\begin{aligned} \text{Dollar fair value change of the interest rate sensitive liabilities} &= (\text{Duration of interest rate sensitive liabilities}) \times \Delta y \times (\text{Fair value of interest rate sensitive liabilities}) \end{aligned}$$

- (C) The change in the allowable interest rate derivatives for an interest rate increase of Δy is determined as follows:

$$\begin{aligned} \text{Effective dollar duration of the allowable interest rate derivatives portfolio} &= \text{Sum of the effective dollar duration of the allowable interest rate derivatives for a } \Delta y \text{ increase in interest rates} \end{aligned}$$

- (D) The capital requirement for an interest rate increase of Δy is determined as the greater of zero and $A - B + C$.
- (E) Steps A through C are repeated for an interest rate decrease of Δy (i.e. $-\Delta y$) and the capital requirement for an interest rate decrease of Δy is the greater of zero and $A - B + C$.
- (F) The interest rate risk margin is then determined as the maximum of D or E.

~~Refer to Appendix 4 to calculate the interest rate risk margin from the interest rate shock factor increase and decrease.~~

4.2 Foreign Exchange Risk

The foreign exchange risk margin is intended to cover the risk of loss resulting from fluctuations in currency exchange rates and is applied to the entire business activity of the insurer.

4.2.1 General Requirements

Two steps are necessary to calculate the foreign exchange risk margin. The first is to measure the exposure in each currency position. The second is to calculate the capital requirement for the portfolio of positions in different currencies.

The foreign exchange risk margin is 10% of the greater of:

- the aggregate net long positions in each currency, adjusted by effective allowable foreign exchange rate hedges if any are used; and
- the aggregate net short positions in each currency, adjusted by effective allowable foreign exchange rate hedges if any are used.

Effective allowable foreign exchange rate hedges are limited to plain-vanilla foreign currency derivatives such as futures and forward foreign currency contracts and currency swaps.

Investments in mutual funds and other similar assets should be viewed on a “look through” basis for foreign exchange risk. The assets in the fund that are denominated in a foreign currency are to be included in the calculation to determine the capital requirement for each currency position.

4.2.2 Foreign Exchange Risk Margin

Step 1: Measuring the exposure in a single currency

The net open position for each currency is calculated by summing:

- the net spot position, defined as all asset items less all liability items denominated in the currency under consideration, including accrued interest and accrued expenses if they are subject to exchange rate fluctuations;

- the net forward position (i.e. all net amounts under forward foreign exchange transactions, including currency futures and the principal on currency swaps), valued at current spot market exchange rates or discounted using current interest rates and translated at current spot rates;
- guarantees (and similar instruments) that are certain to be called and are likely to be irrecoverable;
- net future income/expenses not yet accrued but already fully hedged (at the discretion of the reporting institution); and
- any other item representing a profit or loss in foreign currencies.

Adjustments

For insurers with foreign operations, those items that are currently deducted from capital available in calculating the MCT ratio and are denominated in the corresponding currency may be excluded from the calculation of net open currency positions, to a maximum of zero. For example:

- goodwill and other intangibles;
- interests in non-qualifying subsidiaries, associates and joint ventures;
- non-allowable foreign exchange rate hedges that are not considered in capital available.

Carve-out

An insurer with a net open long position in a given currency may reduce the amount of the net exposure, to a maximum of zero, by the amount of a carve-out, which is equivalent to a short position of up to 25% of the liabilities denominated in the corresponding currency.

Step 2: Calculating the capital requirement for the portfolio

The nominal amount (or net present value) of the net open position in each foreign currency calculated in Step 1 is converted at a spot rate into Canadian dollars. The gross capital requirement is 10% of the overall net open position, calculated as the greater of:

- the sum of the net open long positions; and
- the absolute value of the sum of the net open short positions.

Example 4.2

An insurer has \$100 of U.S. assets and \$50 of U.S. liabilities and the spot exchange rate is 1.000.

- the net spot position, defined as assets less liabilities, is a long position of \$50;

- the carve-out, using 25% of liabilities, is:

$$= 25\% \times \$50$$

$$= \$12.5$$

- therefore, the foreign exchange risk margin is:

$$= 10\% \times \text{MAX}^{19} ((\text{net spot position} - \text{carve-out}), 0)$$

$$= 10\% \times \text{MAX} ((\$50 - \$12.5), 0)$$

$$= 10\% \times \$37.5$$

$$= \$3.75$$

4.2.2.1 Allowable Foreign Currency Hedges

Foreign currency derivatives are those for which the cash flows are dependent on future foreign exchange rates. They may be used to hedge an insurer's foreign exchange risk and as such, may be recognized in the determination of the capital requirement for foreign exchange risk, subject to the following requirements.

Only effective hedges that offset the changes in fair value of the hedged item may be included in the foreign exchange risk calculation. The company must be able to demonstrate to the AMF the effectiveness of its foreign exchange hedges.

Insurers with foreign currency derivatives on their balance sheet must be able to demonstrate that the addition of such derivatives does not result in increased risk. If the insurer cannot demonstrate that the derivatives do not result in increased risk, then the AMF may require additional capital.

Only plain-vanilla foreign currency derivatives may be recognized in the calculation of the foreign exchange capital requirement. Plain-vanilla foreign currency derivative instruments are limited to the following:

- futures foreign currency contracts;
- forward foreign currency contracts;
- currency swaps.

Other foreign currency derivatives, including options on foreign currencies, are not considered plain-vanilla and are not to be recognized in the determination of the foreign exchange risk margin.

¹⁹ The carve-out can be used to reduce the net open long currency position to a minimum of zero.

Derivatives used for hedging a P&C insurer's foreign exchange risk are subject to credit risk requirements. Refer to section 5.2 for further details.

4.2.2.2 Measurement of Forward Currency Positions

Forward currency positions should be valued at current spot market exchange rates. It would not be appropriate to use forward exchange rates since they partly reflect current interest rate differentials. Insurers that base their normal management accounting on net present values are expected to use the net present values of each position, discounted using current interest rates and translated at current spot rates, for measuring their forward currency positions.

4.2.2.3 Accrued and Unearned Interest Income and Expenses

Accrued interest, accrued income and accrued expenses should be treated as a position if they are subject to exchange rate fluctuations. Unearned but expected future interest, income or expenses may be included, provided the amounts are certain and have been fully hedged by allowable forward foreign exchange contracts. Insurers must be consistent in their treatment of unearned interest, income and expenses and must have written policies covering the treatment. The selection of positions that are only beneficial to reducing the overall position will not be permitted for capital purposes.

4.2.2.4 Unregistered Reinsurance

A separate component calculation must be performed for each group of liabilities ceded under an unregistered reinsurance agreement to a reinsurer that is backed by a distinct pool of assets, where the defining characteristic of the pool is that any asset in the pool is available to pay any of the corresponding liabilities.

Each calculation should take into consideration the ceded liabilities, the assets supporting them, and deposits placed by the reinsurer to cover the capital requirement for the ceded liabilities, if the deposits are in a currency different from the currency in which the ceded liabilities are payable to policyholders.

If some of the assets supporting the liabilities ceded under an unregistered reinsurance agreement are held by the ceding insurer (e.g. funds withheld), the insurer's corresponding liability should be treated as an asset in the calculation of the open positions for the ceded business.

Excess deposits placed by an unregistered reinsurer within a pool of supporting assets may be used to reduce the foreign exchange risk requirement for the corresponding ceded business to a minimum of zero. Any requirements not covered by excess deposits must be added to the ceding company's own requirement.

4.3 Equity Risk

Equity risk is the risk of economic loss due to fluctuations in the prices of common shares.

A 30% risk factor applies to investments in common shares and joint ventures in which an insurer holds less than or equal to 10% ownership interest.

4.4 Real Estate Risk

Real estate risk is the risk of economic loss due to changes in the value of a property or in the amount and timing of cash flows from investments in real estate.

<u>Risk Factor</u>	<u>Real Estate</u>
<u>10%</u>	<u>Held for own use</u>
<u>20%</u>	<u>Held for investment purposes</u>

For own-use properties, the risk factor is applied to the value using the cost model, excluding any unrealized fair value gains (losses) resulting from the conversion to IFRS, or subsequent unrealized fair value gains (losses) due to revaluation.

4.5 Other Market Risk Exposures

Other market risk exposures include assets that fall in the category “Other assets”, for example, equipment, that are exposed to asset value fluctuations that may result in the value realized upon disposal being less than the balance sheet carrying value. A 10% risk factor applies to other assets as part of the total capital requirements for market risk.

Chapter 35. ~~Asset Yield Deficiency~~Credit Risk

Credit risk is the risk of loss arising from a counterparty's potential inability or unwillingness to fully meet its contractual obligations due to an insurer. Exposure to this risk occurs any time funds are extended, committed, or invested through actual or implied contractual agreements. Components of credit risk include loan loss/principal risk, pre-settlement/replacement risk and settlement risk. Counterparties covered by this guideline include issuers, debtors, borrowers, brokers, policyholders, reinsurers and guarantors.

All on- and off-balance sheet exposures are subject to a specific risk factor that either:

- corresponds to the external credit rating of the counterparty or issuer; or
- represents a prescribed factor determined by the AMF.

To determine the capital requirements for balance sheet assets, factors are applied to the balance sheet values or other specified values of these assets. To determine the capital requirements for off-balance sheet exposures, factors are applied to the exposure amounts determined according to section 5.2. Collateral and other forms of credit risk mitigators may be used to reduce the exposure. No risk factors are applied to assets deducted from capital available (reference section 2.3.1). The resulting amounts are summed to arrive at the credit risk capital requirements.

~~35.1 Capital Requirements for Balance Sheet Assets~~Description of Asset Risks

For the purpose of calculating the capital requirements for credit risk, balance sheet assets should be valued at their balance sheet carrying amounts, with the following exceptions:

- loans carried at fair value under the fair value option, fair value hedge accounting, or available-for-sale accounting, which should be valued at amortized cost;
- off-balance sheet exposures which should be valued in accordance with section 5.2.

~~The capital required for assets covers the potential losses resulting from asset default and the related loss of income, and the loss of market value of equities and the related reduction in income.~~

~~To determine the risk-based capital requirement for assets, P&C insurers must apply a factor to the balance sheet value of each asset. For loans, the factors are applied to amortized cost. (No asset factor is applied to assets deducted from Capital Available, refer to chapter 2). The total of these amounts represents the capital required for asset risks.~~

~~3.2~~ Government Grade

~~Government grade securities include securities issued or guaranteed by, loans made or guaranteed by, and accounts receivable from:~~

- ~~the federal government or an agent of the Crown;~~
- ~~a provincial or territorial government of Canada or one of its agents;~~
- ~~a municipality or school corporation in Canada;~~
- ~~the central government of a foreign country where:~~
 - ~~□ the securities are rated AAA; or if not rated~~
 - ~~□ the long-term sovereign credit rating of that country is AAA.~~

3.35.1.1 Use of Ratings

Many of the ~~capital factor~~risk factors in this guideline depend on the external credit rating assigned to an asset or an obligor. In order to use a factor that is based on a rating, a P&C insurer must meet all of the conditions specified below.

Insurers may recognize credit ratings from the following rating agencies for MCT purposes:

- DBRS;
- Moody's Investors Service;
- Standard and Poor's (S&P);
- Fitch Rating Services.

An insurer must choose the rating agencies it intends to rely on and then use their ratings for MCT purposes consistently for each type of claim. Insurers ~~should not select~~ may not "cherry pick" the assessments provided by different rating agencies with the sole intent to reduce their capital requirements (i.e. "cherry picking is not permitted").

Any rating used to determine a factor must be publicly available, i.e., the rating must be published in an accessible form and included in the rating agency's transition matrix. Ratings that are made available only to the parties to a transaction do not satisfy this requirement.

If an insurer is relying on multiple rating agencies and there is only one assessment for a particular claim, that assessment should be used to determine the capital requirement for the claim. If there are two assessments from the rating agencies used by an insurer and these assessments differ, the insurer should apply the ~~capital requirement~~risk factor corresponding to the lower of the two ratings. If there are three or more assessments for a claim from an insurer's chosen rating agencies, the insurer should exclude one of the ratings that corresponds to the lowest ~~capital factor~~risk factor, and then use the rating that corresponds to the lowest ~~capital factor~~risk factor of those that remain (i.e., the insurer should use the second-highest rating from those available, allowing for multiple occurrences of the highest rating).

Where an insurer holds a particular securities issue that carries one or more issue-specific assessments, the ~~capital factor~~capital requirement for the claim will be based on these assessments. Where an insurer's claim is not an investment in a specifically rated security, the following principles apply:

- in circumstances where the borrower has a specific rating for an issued debt security, but the insurer's claim is not an investment in this particular security, a rating of BBB- or better on the rated security may only be applied to the insurer's unrated claim if this claim ranks *pari passu* or senior to the rated claim in all respects. If not, the credit rating cannot be used and the insurer's claim must be treated as an unrated obligation;
- in circumstances where the borrower has an issuer rating, this assessment typically applies to senior unsecured claims on that issuer. Consequently, only senior claims on that issuer will benefit from a BBB- or better issuer assessment; other unassessed claims on the issuer will be treated as unrated. If either the issuer or one of its issues has a rating of BB+ or lower, this rating should be used to determine the ~~capital factor~~risk factor for an unrated claim on the issuer;
- short-term assessments are deemed to be issue specific. They can only be used to derive ~~capital factor~~capital requirements for claims arising from the rated security. They cannot be generalized to other short-term claims, and in no event can a short-term rating be used to support a ~~capital factor~~risk factor for an unrated long-term claim;
- where the capital requirement for an unrated exposure is based on the rating of an equivalent exposure to the borrower, foreign currency ratings should be used for exposures in foreign currency. Canadian currency ratings, if separate, should only be used to determine the ~~capital factor~~capital requirements for claims denominated in Canadian currency.

The following additional conditions apply to the use of ratings:

- external assessments for one entity within a corporate group may not be used to determine the ~~capital factor~~risk factor for other entities within the same group. This condition does not apply to assets held with a credit union that is a member of a federation within the meaning of *An Act respecting financial services cooperatives* (R.S.Q., chapter C-67.3)²⁰;
- no rating may be inferred for an unrated entity based on assets that the entity possesses;
- in order to avoid the double counting of credit enhancement factors, insurers may not recognize ~~asset yield deficiency~~credit risk mitigation if the credit enhancement has already been reflected in the issue-specific rating;

²⁰ To qualify for this exception, the insurer must refer to a rating assigned to a financial services cooperative by a rating agency duly recognized under this guideline, which rating should be closely linked to the evaluation of the quality of the financial condition and the risk assessment of the credit unions that are members of the federation. If more than one financial services cooperative is assessed, the insurer must apply the ~~capital~~risk factor corresponding to the lowest rating.

- an insurer may not recognize a rating if the rating is at least partly based on unfunded support (e.g. guarantees, credit enhancement or liquidity facilities) provided by the insurer itself or one of its associates;
- any assessment used must take into account and reflect the entire amount of credit risk exposure an insurer has with regard to all payments owed to it. In particular, if an insurer is owed both principal and interest, the assessment must fully take into account and reflect the ~~asset yield deficiency~~credit risk associated with repayment of both principal and interest;
- insurers may not rely on ~~any~~unsolicited ratings in determining the ~~capital factor~~risk factor for an asset, except where the asset is a sovereign exposure and a solicited rating is not available.

~~3.4~~ **Capital Factors for Asset Risks**

~~3.4.1~~ **Fixed Capital Factors**

~~3.4.25.1.2~~ **Variable Credit ~~Capital Factor~~Risk Factors**

~~Varying~~Various ~~capital factor~~risk factors are applied to invested assets depending on the external credit ratings and the remaining term to maturity (reference section 3.3), as outlined below.

Investments in ~~securitized assets~~, mutual funds or other similar assets must be broken down by type of investment (bonds, preferred shares, etc), ~~then be reported on the applicable lines of page 30.71~~, and assigned the appropriate ~~capital factor~~risk factor relating to the investment. If the information available on an investment is not broken down, then the factor of the riskiest asset being securitized, or held in the fund, is assigned to the entire investment.

Long-term Obligations

- Long-term obligations, including term deposits, bonds ~~and~~ debentures and loans that are not eligible for a 0% ~~capital factor~~ risk factor have ~~capital factor~~ risk factors according to the following table:

Rating	<u>Remaining</u> Term to Maturity		
	1 year or less	Greater than 1 year up to and including 5 years	Greater than 5 years
AAA	0.25%	0.50%	1.25%
AA+ to AA-	0.25%	1.00%	1.75%
A+ to A-	0.75%	1.75%	3.00%
BBB+ to BBB-	1.50%	3.75%	4.75%
BB+ to BB-	3.75%	7.75%	8.00%
B+ to B-	7.50%	10.50%	10.50%
<u>Unrated</u>	<u>6.00%</u>	<u>8.00%</u>	<u>10.00%</u>
Other	15.50%	18.00%	18.00%

- long-term obligations generally have an original term to maturity at issue of 1 year or more;
- ~~maturity denotes the date a bond will be redeemed, while remaining~~ term to maturity denotes the number of years from the reporting date until ~~that the maturity~~ date;
- insurers may use effective maturity as an option for determining risk factors for investments in long-term obligations subject to a determined cash flow schedule. The following formula may be used to calculate effective maturity:

$$\text{Effective maturity (M)} \equiv \frac{\sum t \times CF_t}{\sum CF_t}$$

where CF_t denotes the cash flows (principal, interest payments and fees) contractually payable by the borrower in period t.
- in cases where an insurer elects not to calculate an effective maturity or if it is not feasible to do so using the above formula, the insurer is required to use the maximum remaining time (in years) that the borrower is permitted to fully discharge its contractual obligation (principal, interest, and fees) under the terms of the loan agreement. Normally, this would correspond to the nominal maturity or term to maturity of the instrument;
- ~~for an amortizing security, a type of debt security in which a portion of the underlying principal amount is paid in addition to periodic interest payments to the security's holder, the weighted average maturity may be used to determine the appropriate term to maturity to refer to in the above table. To determine the weighted average maturity, the contractual principal amortization schedule should be used and not an internally derived estimate;~~

- where information is not available to determine the redemption/maturity of an asset, insurers must use the ~~category with the highest capital factor for that asset. For example, insurers must use the term deposits, bonds and debentures expiring or redeemable or repayable in the~~ “Greater than 5 years” category ~~for that where no information is available to determine the maturity of a given~~ asset.

Short-term Obligations

- Short-term obligations, including commercial paper, that are not eligible for a 0% ~~capital factor~~risk factor, have ~~capital factor~~risk factors assigned according to the following table:

Notation <u>Rating</u>	Factor
A-1, F1, P-1, R-1 or equivalent	0.25%
A-2, F2, P-2, R-2 or equivalent	0.50%
A-3, F3, P-3, R-3 or equivalent	2.00%
<u>Unrated</u>	<u>6.00%</u>
All other ratings, including non-prime and B or C ratings	8.00%

- short-term obligations generally have an original term to maturity at issue of no more than 365 days.

Preferred Shares

- Preferred shares ~~capital factor~~risk factors should be assigned according to the following table:

Rating	Factor
AAA, AA+ to AA-, Pfd-1, P-1 or equivalent	3.0%
A+ to A-, Pfd-2, P-2 or equivalent	5.0%
BBB+ to BBB-, Pfd-3, P-3 or equivalent	10.0%
BB+ to BB-, Pfd-4, P-4 or equivalent	20.0%
B+ or lower, Pfd-5, P-5 or equivalent or unrated	30.0%

5.1.3 Fixed Credit Risk Factors

~~0% Capital Factor~~Risk factor

- Cash held on the insurer's own premises;
- obligations²¹ of federal, provincial, and territorial ~~and municipal governments, and school corporations~~ in Canada;

²¹ Including securities loans and accounts receivable.

- obligations of agents of the federal, provincial or territorial governments in Canada whose obligations are, by virtue of their enabling legislation, direct obligations of the parent government;
- ~~obligations of sovereigns rated AA- or better and their central banks²² obligations of AAA-rated central governments and central banks, or obligations of organizations with the guarantee of the central government;~~
- obligations ~~that have been explicitly, directly, irrevocably and unconditionally guaranteed~~ backed by a ~~g~~Government Grade ~~entity eligible for a 0% risk factor~~ guarantor including, for example, residential mortgages insured under the ~~National Housing Act ("NHA")~~ HA or equivalent provincial mortgage insurance program, and NHA mortgage-backed securities that are guaranteed by the Canada Mortgage and Housing Corporation;
- insurance receivables from associated²³ registered reinsurers (reference section ~~4.3.13.4.1~~);
- unearned premiums recoverable from associated registered reinsurers (reference section ~~4.3.13.4.1~~);
- unpaid claims and adjustment expenses recoverable from associated registered reinsurers (reference section ~~4.3.13.4.1~~);
- ~~deferred tax assets arising from discounting of claims reserves for tax purposes, or from unrealized capital gains, that are recoverable from income taxes paid in the three immediately preceding fiscal years;~~
- current tax assets (income taxes receivable);
- ~~DPAE, including DPAE on commissions, deferred premium taxes and others, and excluding DPAE on commissions for accident and sickness business;~~
- instalment premiums receivable (not yet due);
- ~~any deductions from capital, including goodwill, intangible assets and interests in non-qualifying subsidiaries, associates, and joint ventures with more than 10% ownership interest.~~

0.25% Risk factor

- Demand deposits, certificates of deposit, drafts, checks, acceptances and similar obligations that have an original maturity of less than three months, and that are drawn on regulated deposit-taking institutions subject to the solvency requirements of the Basel Framework.

²² Sovereign obligations rated lower than AA- may not receive a factor of 0%, and are instead subject to the factor requirements in section 5.1.2.

²³ Associates under the terms of this guideline.

~~0.705%~~ ~~Capital Factor~~ Risk factor

- ~~• Unearned premiums recoverable from non-associated registered reinsurers (reference section 4.3.1);~~
- ~~Insurance~~ receivables from non-associated registered reinsurers (reference section ~~4.3.13.4.1~~);
- accounts receivable from the Facility Association and the *Plan de répartition des risques* (P.R.R.).

~~2.5%~~ ~~Capital Factor~~ Risk factor

- Investment income due and accrued;
- ~~• Unearned premiums recoverable from non-associated registered reinsurers (reference section 4.3.13.4.1);~~
- unpaid claims and adjustment expenses recoverable from non-associated registered reinsurers (reference section ~~4.3.13.4.1~~).

~~4%~~ ~~Capital Factor~~ Risk factor

- ~~• Accounts receivable, not yet due and outstanding less than 60 days, from agents, brokers, non-qualifying subsidiaries, associates, joint ventures and policyholders, including other receivables;~~
- ~~• instalment premiums outstanding less than 60 days;~~
- ~~F~~irst mortgages on one- to four-unit residential dwellings.

5% Risk factor

- ~~• Accounts receivable, not yet due and outstanding less than 60 days, from agents, brokers, non-qualifying subsidiaries, associates, joint ventures and policyholders, including other receivables²⁴;~~
- ~~• instalment premiums outstanding less than 60 days;~~

~~810%~~ ~~Capital Factor~~ Risk factor

- Accounts receivable, outstanding 60 days or more, from agents, brokers, non-qualifying subsidiaries, associates, joint ventures and policyholders, including instalment premiums and other receivables²⁵;

²⁴ ~~Includes receivables for assumed business from unregistered insurers.~~

²⁵ ~~Includes receivables for assumed business from unregistered insurers.~~

- ~~property (real estate for an insurer's own use, excluding any unrealized fair value gains (losses) resulting from the conversion to IFRS, or subsequent unrealized fair value gains (losses) due to revaluation);~~

- commercial mortgages and other residential mortgages that do not qualify as first mortgages on one- to four-unit residential dwellings;

- the amount of ~~owned available refunds of~~ defined benefit pension plan surplus assets included in capital available;

- DTAs arising from temporary differences that can be realized through loss carrybacks arising from income taxes paid in the three immediately preceding fiscal years;

- other investments not specified in this section or section 45.5 as part of other market risk exposures, excluding derivative-related amounts. Capital requirements for derivative-related amounts included in other investments are set out in section 5.2;

- other assets not specified in this section or section 4.5 as part of other market risk exposures, excluding other investments.

~~10% Capital Factor~~

- ~~Other loans.~~

15% ~~Capital Factor~~ Risk factor

- ~~Common shares;~~

- ~~investments in joint ventures with less than or equal to 10% ownership;~~

- ~~investment properties (investments in real estate not for an insurer's own use);~~

- ~~M~~mortgages secured by undeveloped land (e.g., construction financing), other than land used for agricultural purposes or for the production of minerals. A property recently constructed or renovated will be considered as "under construction" until it is completed and 80% leased;

20% Risk factor

- ~~Q~~other recoverables (mainly salvage and subrogation) on unpaid claims;

- ~~SIR~~self-insured retention ~~reco~~aerables not deducted from capital (reference section 4.43.5);

- assets held for sale (other than financial)²⁶ ~~These assets must be reported on line 88, page 30.71~~

²⁶ 1) Alternatively, assets classified as held for sale may be re-consolidated (look-through approach) at the option of the insurer. If this method is selected, any write-down made as a result of re-measuring the assets classified as held for sale at the lower of carrying amount and fair value less costs to sell should be reflected in the MCT after re-consolidation. Any asset within a consolidated group that is deducted from capital available for MCT purposes should continue to be deducted from capital when it becomes an asset held for sale.

2) If the insurer has elected to apply a 20% risk factor to assets held for sale instead of using the look-through approach, associated liabilities held for sale should be subject to the usual MCT treatment of liabilities as per chapter 3.

- other investments. These include investments ~~other than~~ term deposits, bonds and debentures, loans, shares, or investment in real estate (real estate not for the insurer's own use) and derivative-related amounts. Capital requirements for derivative-related amounts included in other investments are set out in chapter 7 and are reported on page 30.70, with capital required for structured settlements, letters of credit, derivatives and other exposures.

~~3545%~~ Capital FactorRisk factor

- Deferred premium commissions, net of an adjustment for unearned commissions. The 35% capital factor applies to this calculated net value and not to the book value entered on page 30.71. If the net value is negative, an amount of zero should be reported in column 3 of page 30.71. Any excess adjustment for unearned commissions cannot be recognized as capital;
- other assets, including equipment, (line 86, page 30.71) to a limit of 1% of total assets. Any excess over the limit is included with the assets with a capital requirement of 100%, on line 17, page 30.70;
- Loans to or other debt instruments (bonds, debentures, mortgages, etc.) not considered as capital in non-qualifying (non-consolidated) subsidiaries, associates and joint ventures with more than a 10% ownership interest;
- DPAE on commissions related to accident and sickness business (reference section 3.7.1).~~computer software classified as an intangible asset;~~
- ~~assets held for sale (other than financial). These assets must be reported on line 88, page 30.71.~~

5.2 Capital Requirements for Off-Balance Sheet Assets Exposures

3.4.3 Derivatives

~~Capital requirements for derivatives are set out in chapter 7.~~

~~Chapter 7. Risks Associated with Structured Settlements, Letters of Credit, Derivatives and Other Exposures~~

~~7.1 Description of risks for structured settlements, letters of credit, derivatives and other exposures~~

~~This section applies to counterparty risk exposures not covered by the treatment for assets.~~

The capital required for off-balance sheet exposures such as structured settlements, letters of credit or non-owned deposits, derivatives and other exposures is calculated in a manner similar to the on-balance sheet assets in that the credit risk exposure is multiplied by a counterparty risk factor to arrive at the capital required. However, unlike most assets, the face amount of an off-balance sheet exposure structured settlements, letters of credit, derivatives and other exposures does not necessarily reflect the true amount of the credit risk exposure. To

approximate this ~~exposure, a credit equivalent amount is calculated for each exposure. credit risk exposure, the face~~ This amount/~~cost of the instrument~~, net of any collateral or guarantees, is ~~then~~ multiplied by a credit conversion factor. The determination of the counterparty ~~credit~~ risk categories and the approach for determining the eligibility of collateral and guarantees is the same as it is for other assets.

The risk to a P&C insurer associated with structured settlements, letters of credit, ~~non-owned deposits~~, derivatives and other exposures and the amount of capital required to be held against this risk is:

- the ~~credit equivalent amount value~~ of the instrument (~~Possible Credit Exposure~~) at the reporting date;
- less: the value of eligible ~~movable hypothec collateral securities~~ or guarantees (~~Movable Hypothecs and Guarantees~~; reference section ~~3.55.3~~);
- multiplied by: a factor reflecting the nature and maturity of the instrument (Credit Conversion Factors); ~~and~~
- multiplied by: a factor reflecting the risk of default of the counterparty to a transaction (Risk Factors).

~~Refer to Appendix 5, Worksheet - Capital Required - Structured Settlements, Derivatives, Letters Of Credit, and Other Exposures.~~

5.2.1 Credit Equivalent Amount

7.2 Possible Credit Exposure

The ~~possible~~-credit ~~equivalent amount exposure~~ related to ~~off-balance sheet structured settlements, letters of credit, derivatives and other~~ exposures varies ~~depending according to~~ the type of instrument.

7.2.1.1 Structured Settlements

The ~~possible~~-credit ~~equivalent amount exposure~~ for a “Type 1” structured settlement is the current replacement cost of the ~~instrument~~settlement.

~~Instruments included in this section are primarily~~ “Type 1” structured settlements ~~that~~ are not recorded as liabilities on the balance sheet ~~and~~.

~~Type 1 structured settlements~~ have the following characteristics:

- an annuity is purchased by a P&C insurer who is named as the owner. There is an irrevocable direction from the P&C insurer to the annuity underwriter to make all payments directly to the claimant;

- since the annuity is non-commutable, non-assignable and non-transferable, the P&C insurer is not entitled to any annuity payments and there are no rights under the contractual arrangement that would provide any current or future benefit to the P&C insurer;
- the P&C insurer is released by the claimant ~~to evidence indicating~~ settlement of the claim amount;
- the P&C insurer remains liable to make payments to the claimant in the event and to the extent the annuity underwriter fails to make payments under the terms and conditions of the annuity and the irrevocable direction given.

Under this type of structured settlement arrangement, the P&C insurer ~~does-is~~ not ~~have-required~~ to recognize a liability to the claimant, nor ~~does-is~~ it ~~have-required~~ to recognize the annuity as a financial asset. However, the P&C insurer is exposed to some credit risk by guaranteeing the obligation of the annuity underwriter to the claimant and, consequently, must set aside additional capital.

For details on the types of structured settlements, insurers should refer to Special Topics, section IV of the Instructions to the P&C-4 form.

7.2.2 — Letters of Credit and Other Collateral

~~The possible credit exposure for a letter of credit is the face value of the instrument.~~

~~Letters of credit may include, for example:~~

- ~~letters of credit serving as direct credit substitutes backing financial claims where the risk of loss to the insurer is directly dependent on the creditworthiness of the counterparty;~~
- ~~letters of credit acting as transaction-related contingencies associated with the ongoing business activities of a counterparty where the risk of loss to the P&C insurer depends on the likelihood of a future event that is independent of the creditworthiness of the counterparty.~~

~~Collateral other than letters of credit, such as non-owned deposits used to reduce unregistered reinsurance margin are also considered credit substitutes backing financial claims.~~

7.2.35.2.1.2 Derivatives

The ~~possible~~ credit equivalent amount exposure for derivatives is the positive replacement cost (obtained by marking to market) plus an amount for potential future credit exposure (an “add-on” factor).

Derivatives include forwards, futures, swaps, purchased options, and other similar contracts. Insurers are not exposed to credit risk for the full face value of these contracts (notional principal amount), only to the potential cost of replacing the cash flow (on contracts showing a positive value) if the counterparty defaults. The credit equivalent amounts are assigned the risk factor appropriate to the counterparty in order to calculate the capital requirement. Instruments traded on exchanges are excluded where they are subject to daily receipt and payment of cash variation margins.

The ~~possible~~ credit equivalent amount exposure depends on the maturity of the contract and the volatility of the underlying instrument. It is calculated by adding:

- the total replacement cost (obtained by marking to market) of all contracts with positive values; and
- an amount for potential future credit exposure (or “add-on”). This is calculated by multiplying the notional principal amount by the following “add-on” factors.

Residual Maturity (01)	Interest Rate (02)	Exchange Rate <u>and Gold</u> (03)	Equity (04)	<u>Precious Metals except Gold</u> (05)	Other Instruments (06)
One year or less	0.0%	1.0%	6.0%	<u>7.0%</u>	10.0%
Over one year <u>to five years</u>	0.5%	5.0%	8.0%	<u>7.0%</u>	12.0%
<u>Over five years</u>	<u>1.5%</u>	<u>7.5%</u>	<u>10.0%</u>	<u>8.0%</u>	<u>15.0%</u>

Notes

- Instruments traded on exchanges do not require capital for counterparty credit risk where they are subject to daily margining requirements;
- for contracts with multiple exchanges of principal, the factors are to be multiplied by the number of remaining payments in the contract;
- For contracts that are structured to settle outstanding exposures following specified payment dates, and where the terms are reset so that the market value of the contract is zero on these specified dates, the residual maturity is considered to be the time until the next reset date. In the case of interest rate contracts with residual maturities of more than one year and that also meet the above criteria, the add-on factor is subject to a floor of -0.5%;

- ~~• The notional principal amount is:~~
- ~~•~~
- ~~• the stated notional amount, except where the stated notional amount is leveraged or enhanced by the structure of the transaction. In these cases, insurers must use the actual or effective notional amount when determining potential future exposure²⁷;~~
- ~~•~~
- ~~• nil, where the credit exposure on single currency floating/floating interest rate swaps would be evaluated solely on the basis of their marked-to-market value;~~

~~²⁷ For example, if a stated notional amount is based on a specified parameter (e.g. LIBOR), but has actual payments calculated at two times that parameter, the amount for potential future credit exposure is based on twice the stated notional amount.~~

- ~~• for contracts with multiple exchanges of principal, the sum of the remaining payments.~~
- ~~•~~
- ~~c~~Contracts not covered by columns 02 to 054 in the above table are to be treated as “Other Instruments” for the purpose of determining the “add-on” factor;.
- ~~• no potential credit exposure would be calculated for single currency floating/floating interest rate swaps; the credit exposure on these contracts would be evaluated solely on the basis of their mark-to-market value;~~
- ~~• the add-ons are based on effective rather than the stated notional amount. In the event that, except where the stated notional amount is leveraged or enhanced by the structure of the transaction, in these cases, insurers must use the actual or effective notional amount when determining potential future exposure. For example, a stated notional amount of \$1 million with payments calculated at two times LIBOR would have an effective notional amount of \$2 million;~~
- ~~• potential credit exposure is to be calculated for all over-the-counter (“OTC”) contracts (with the exception nil, where the credit exposure on of single currency floating/floating interest rate swaps), regardless of whether the replacement cost is positive or negative. would be evaluated solely on the basis of their marked-to-market value~~
- ~~• potential credit exposure is to be calculated for all over-the-counter (“OTC”) contracts (with the exception of single currency floating/floating interest rate swaps), regardless of whether the replacement cost is positive or negative.~~

~~No add-on for potential future exposure is required for credit derivatives. The credit equivalent amount for a credit derivative is equal to the greater of its replacement cost or zero.~~

~~7.2.45.2.1.3~~ Other Exposures

~~— This section includes any other exposures not covered above. Some examples are provided below.~~

~~7.2.4.1~~ Commitments

A commitment involves an obligation (with or without a material adverse change clause or similar clause) of the insurer to fund its customer in the normal course of business should the customer seek to draw down the commitment. This includes:

- extending credit in the form of loans or participations in loans, lease financing receivables, mortgages, ~~letters of credit, guarantees~~ or loan substitutes; or
- purchasing loans, securities, or other assets.

Normally, commitments involve a written contract or agreement and a commitment fee or some other form of consideration.

The maturity of a commitment should be measured from the date when the commitment was accepted by the customer, regardless of whether the commitment is revocable or irrevocable, conditional or unconditional, until the earliest of the following two dates on which:

- ~~the date on which~~ the commitment is scheduled to expire; or
- ~~the date on which~~ the insurer can, at its option, unconditionally cancel the commitment.

~~7.2.4.2~~ Repurchase and Reverse Repurchase Agreements

A securities repurchase ("repo") is an agreement whereby a transferor agrees to sell securities at a specified price and repurchase the securities on a specified date and at a specified price. Since the transaction is regarded as a financing transaction for accounting purposes, the securities remain on the balance sheet. Given that these securities are temporarily assigned to another party, the ~~capital~~ factor accorded to the asset should be the higher of the factor of the security and the factor of the counterparty to the transaction (net of any eligible ~~movable hypothec collateral~~).

A reverse repo agreement is the opposite of a repo agreement, and involves the purchase and subsequent sale of a security. Reverse repos are treated as collateralized loans, reflecting the economic reality of the transaction. The risk is therefore to be measured as an exposure to the counterparty. Where the asset temporarily acquired is a security that attracts a lower ~~capital~~ factor, this would be recognized as collateral and the factor would be reduced accordingly.

~~7.2.4.3~~ Guarantees provided in securities lending

In securities lending, insurers can act as principal to the transaction by lending their own securities or as agent by lending securities on behalf of clients. When the insurer lends its own securities, the ~~capital factor~~ risk factor is the higher of:

- the ~~capital factor~~ risk factor related to the instruments lent; or
- the ~~capital factor~~ risk factor for an exposure to the borrower of the securities. The exposure to the borrower may be reduced if the insurer holds an eligible ~~movable hypothec collateral~~ (reference section 3.55.3.1). Where the insurer lends securities through an agent and receives an explicit guarantee of the return of the securities, the insurer may treat the agent as the borrower subject to the conditions in section 3.55.3.2.

When the insurer, acting as agent, lends securities on behalf of a client and guarantees that the securities lent will be returned or the insurer will reimburse the client for the current market value, the insurer should calculate the capital requirement as if it were the principal to the transaction. The capital ~~requirements are those factor is that~~ for an exposure to the borrower of the securities, where the exposure amount may be reduced if the insurer holds an eligible ~~movable hypothec collateral~~ (reference section 3.55.3.1).

For details on how to record these and other such exposures, contact the AMF. In addition, insurers should refer to any other applicable guidelines.

7.35.2.2 Credit Conversion Factors

Separate credit conversion factors exist for structured settlements, letters of credit, non-owned deposits, derivatives and other exposures.

For other exposures, the weighted average of the credit conversion factors, described below, for all of these instruments held by the insurer, should be used~~entered in the appropriate cell in the Appendix 5.~~

100% Conversion Factor

- Direct credit substitutes (general guarantees of indebtedness and guarantee-type instruments, including standby letters of credit and non-owned deposits serving as financial guarantees for, or supporting, loans and securities)~~Guarantees, letters of credit, or other similar irrevocable obligations used as financial guarantees. Generally, these are considered direct credit substitutes where the risk of loss to the insurer is directly dependent on the creditworthiness of the counterparty;~~
- ~~commitments that mature in one year or more, where the insurer cannot cancel or withdraw the commitment at any time without notice and where their drawdown is certain;~~

- derivatives such as forwards, futures, swaps, purchased options (including options purchased over the counter) and other similar derivative contracts, including:
 - ❑ interest rate contracts (single currency interest rate swaps, basis swaps, forward rate agreements and products with similar characteristics, interest rate futures, interest rate options purchased, and similar derivative contracts based on specific parameters or on indices, etc.);
 - ❑ equity contracts (forwards, swaps, purchased options, and similar derivative contracts based on specific parameters or on indices, etc.);
 - ❑ exchange rate contracts (gold contracts, cross-currency swaps, cross-currency interest rate swaps, outright forward foreign exchange contracts, currency futures, currency options purchased, and similar derivative contracts based on specific parameters or on indices, etc.);
 - ❑ precious metals (except gold) and other commodity contracts (forwards, swaps, purchased options, and similar derivative contracts based on specific parameters or on indices, etc.);
 - ❑ other derivative contracts based on specific parameters or on indices (such as catastrophe insurance options and futures).
- forward agreements (contractual obligations) to purchase assets; ~~purchases including a commitment to purchase a loan, security or other asset at a specified future date, usually on prearranged terms;~~
- sale and repurchase agreements;
- all other exposures not contemplated elsewhere (provide details).

50% Conversion Factor

- Structured settlements that are not recorded as liabilities on the balance sheet (refer to Type 1 ~~structured settlements~~ characteristics and to Section IV, *Special Topics*, of the Instructions to the P&C-4 form);
- transaction-related contingencies (for example, warranties and performance-related and non-financial guarantees such as performance-related standby letters of credit related to a particular transaction); ~~(e.g. representing obligations backing the performance of non-financial or specific commercial contracts or undertakings, but not general financial obligations). Performance-related guarantees exclude items relating to non-performance of financial obligations;~~
- commitments with an original maturity exceeding that mature in one year or more, where the insurer cannot cancel or withdraw the commitment at any time without notice and where their drawdown is uncertain.

20% Conversion Factor

- Commitments with an original maturity of one year or less.

0% Conversion Factor

- ~~Commitments that mature in less than one year and other~~ Commitments that are where the insurer has full discretion to unconditionally cancellable ~~or withdraw the commitment~~ at any time without prior notice.²⁸

7.45.2.3 Capital FactorRisk Factors

~~Off-balance sheet~~ Structured settlements, letters of credit, derivatives and other exposures are assigned a ~~capital factor~~risk factor consistent with section 5.1. All criteria in section 5.1 around the use of ratings are applicable to off-balance sheet exposures.

~~Risk factors for structured settlements, which are considered long-term exposures, are based on the credit rating of ranging from 0% to 8.0%, subject to their counterparty from which the annuity is purchased.~~ risk rating (reference chapter 3). The risk factors to be applied are:

<u>Rating</u>	<u>Factor</u>
<u>Rated A- and higher</u>	<u>2.0%</u>
<u>Rated BBB+ and lower</u>	<u>8.0%</u>
<u>Unrated</u>	<u>10.0%</u>
<u>Other</u>	<u>18.0%</u>

0% Factor

- ~~Exposures rated "Government Grade".~~

0.5% Factor

- ~~Structured settlements rated A- and higher;~~
- ~~letters of credit acceptable to the AMF and received from a reinsurer with respect to an unregistered reinsurance agreement or from a policyholder for self-insured retention (chapter 4 and Appendix 5);~~
- ~~derivatives rated A- and higher.~~

2% Factor

- ~~Other exposures rated A- and higher.~~

4% Factor

- ~~Structured settlements rated BBB+ and lower;~~

²⁸ Other than any notice required under legislation or court rulings that require notice.

~~6. derivatives rated BBB+ and lower.~~

~~8% Factor~~

~~7. Other exposures rated BBB+ and lower.~~

~~3.4.4 General~~

- ~~• Where rating information is not available to determine the grade of the counterparty, the counterparty is assigned the riskiest capital factor by type of investment;~~
- ~~• new assets, not currently listed, will be categorized according to their inherent riskiness;~~
- ~~• the total balance sheet value reported in the exhibit "Capital Required for Balance Sheet Assets", on page 30.71 of the P&C-1 Annual Return, is equal to the total assets reported on the balance sheet.~~

3.55.3 Capital Required Treatment of Collateral—Movable Hypothecs and Guarantees

~~This section applies to assets, and to structured settlements, letters of credit, derivatives and other exposures.~~

3.55.3.1 Movable Hypothecs Collateral

A collateralized transaction is one in which:

- an insurer has a credit exposure or potential credit exposure; and
- the credit exposure or the potential credit exposure is hedged in whole or in part by collateral posted by a counterparty or by a third party on behalf of the counterparty.

Recognition of movable hypothecs collateral in reducing the capital requirements required for ~~assets, structured settlements, derivatives and other exposures~~, is limited to cash or securities rated meeting the "Government Grade" criteria or an A- rating and or higher. Any collateral movable hypothec must be held throughout the period for which the asset is held or for which the exposure exists. Only that portion of an obligation exposure that is covered by an eligible movable hypothec collateral will be assigned the capital risk factor given to the movable hypothec collateral, while the uncovered portion retains the risk factor of the underlying counterparty. Only collateral securities with a lower risk factor than the underlying exposure will lead to reduced capital requirements. All criteria in section 5.1 around the use of ratings are applicable to collateral. Where a rating is not available for the collateral asset, exposure, or counterparty where applicable, no reduction in capital required is permitted.

The effects of collateral may not be double counted. Therefore, insurers may not recognize collateral on claims for which an issue-specific rating is used that already reflects that collateral.

~~Collateral securities used to reduce capital requirements must materially reduce the risk arising from the credit quality of the underlying exposure. In particular, collateral used may not be related party obligations of the issuer of the underlying exposure (i.e. obligations of the underlying counterparty itself, its parent, or one of its subsidiaries or associates). Any movable hypothec must be held throughout the period for which the asset is held or for which the exposure exists. Only that portion of an obligation that is covered by an eligible movable hypothec will be assigned the capital factor given to the movable hypothec.~~

~~Collateral held as part of a movable hypothec is subject to the same capital factors as those applied to similar assets owned by the insurer (reference section 3.4)~~

3.55.3.2 Guarantees

Investments (principal and interest) or exposures that have been explicitly, directly, irrevocably and unconditionally guaranteed by a guarantor whose long-term issuer credit rating ~~is or, in the case of a government, the long-term sovereign credit rating, satisfies the « Government Grade» criteria or an A-~~ rating and higher, may attract the ~~capital factor~~ risk factor allocated to a direct claim on the guarantor where the ~~desired~~ effect is to reduce the risk ~~exposure~~. ~~Thus only guarantees²⁹ issued by entities with a lower risk factor than the underlying counterparty will lead to reduced capital requirements.~~

~~Where the recovery of losses on a loan, financial lease agreement, security or exposure is partially guaranteed, only the part that is guaranteed is to be weighted according to the capital risk factor of the guarantor (see following examples). The uncovered portion retains the risk factor of the underlying counterparty.~~

~~All criteria in section 5.1 around the use of ratings remain applicable to guarantees. Where a rating is not available for the investment, exposure, or guarantor where applicable, no reduction in capital required is permitted.~~

~~An insurer may not recognize a gGuarantees provided by a related enterprise (parent, subsidiary or associate). are not eligible for Tthis treatment follows the principle on the basis that guarantees within a corporate group are not considered to be a substitute for capital.~~

~~Where a rating is not available for the investment, exposure, or guarantor where applicable, no reduction in capital required is permitted. The effects of credit protection may not be double counted. Therefore, no capital recognition is given to credit protection on claims for which an issue-specific rating is used that already reflects that protection.~~

To be eligible, guarantees should cover the full term of the instrument and be legally enforceable.

~~Where the recovery of losses on a loan, financial lease agreement, security or exposure is partially guaranteed, only the part that is guaranteed is to be weighted according to the capital factor of the guarantor (see following examples).~~

²⁹ ~~Letters of credit for which a company is the beneficiary are included within the definition of guarantees, and receive the same capital treatment.~~

~~3.55.3.2.1~~ **Public Sector Entities in Competition**

~~Insurers may not recognize guarantees made by public sector entities, including federal, provincial and territorial governments in Canada, that would disadvantage private sector competition. Insurers should look to the host (sovereign) government to confirm whether a public sector entity is in competition with the private sector.~~

3.55.3.3 Examples

Example 53-1: ~~asset (reference chapter 3)~~Credit risk exposure

To record a \$100,000 bond rated AAA due in 10 years that has a government guarantee of 90%, the insurer would report a balance sheet value of \$90,000 (\$100,000 x 90%) in the ~~“Government Grade”~~0% risk weighted category and a balance sheet value of \$10,000 (\$100,000 - \$90,000) in the AAA category under “Term Deposits, Bonds and Debentures - Expiring or redeemable in more than five years”. The capital required in the ~~“Government Grade”~~0% risk weighted category is \$0 (\$90,000 x 0.0%).

The capital required in the AAA category is \$125 (\$10,000 x 1.25%) for a total capital requirement of \$125. An example of the calculation, assuming no other assets, is provided in the table below.

	Factor (%)	Balance Sheet Value	Capital Required
Investments :			
Term Deposits, Bonds and Debentures :			
Expiring or redeemable in more than five years:	Abso		
Government Grade 0% risk factor	0.0%	\$90,000	\$0
Rating: AAA	1.25%	\$10,000	\$125
Total		\$100,000	\$125

Example 35-2: Type 1 structured settlement ~~(reference chapter 7)~~

To record a \$300,000 Type 1 structured settlement rated BBB+ and lower, backed by ~~a movable hypothec collateral~~ or by a guarantee of \$200,000 from a counterparty rated A- or higher, the insurer would report a ~~possible credit exposure~~credit equivalent amount of \$300,000 and ~~a movable hypothec collateral~~ and guarantees of negative \$200,000 in the BBB+ and lower category, and ~~a movable hypothec collateral~~ and guarantees of \$200,000 in the A- and higher category ~~in Appendix 5 under “Structured Settlements”~~.

The capital required in the BBB+ and lower category is \$24,000 ((\$300,000 - \$200,000) x 50% x 84%). The capital required in the A- and higher category is \$500 (\$200,000 x 50% x 0.5%) for a total capital requirement of \$24,500. An example of the calculation, assuming no other exposures, is provided in the following table.

	Possible Credit Exposure Equivalent Amount (01)	Movable Collateral Hypo thee and Guarantees (02)	Credit Conversion Factor (%) (03)	Capital Risk Factor (%) (04)	Capital Required (05)
Structured Settlements:					
Government-Grade 0% risk factor					
Rating: A- and higher		\$200,000	50%	0.5%	\$500
Rating: BBB+ and lower	\$300,000	(\$200,000)	50%	48.0%	\$24,000
Total					\$24,500

Chapter 6. Foreign ExchangeOperational Risk

~~This chapter was intentionally left blank. Foreign exchange risk capital requirement will be specified later.~~

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. The definition includes legal risk³⁰ but excludes strategic and reputation risk.

Exposure to operational risk results from either day-to-day operations or a specific, unanticipated event.

6.1 Operational Risk Formula

The two risk drivers used to determine the operational risk margin are capital required and premiums, subject to a cap.

$$\text{Operational risk margin} \equiv \text{MIN} \{30\% \text{ CR}_0, (10\% \text{ CR}_0 + 3\% \text{ P}_s + 2\% \text{ P}_a + 3\% \text{ P}_c + 3\% \text{ P}_\Delta)\}$$

where:

CR₀: is the total capital required for the reporting period, before the operational risk margin and diversification credit

P_w: is the direct premiums written in the past 12 months

P_a: is the premiums assumed in the past 12 months

P_c: is the premiums ceded in the past 12 months

P_Δ: is the growth in premiums in the past 12 months

6.2 Components of Operational Risk Margin

6.2.1 Capital Required

A portion of the operational risk margin is based on total capital required, reflecting the overall riskiness of an insurer. A 10% risk factor applies to total capital required, before the operational risk margin and diversification credit.

6.2.2 Premium Volume

The following risk factors apply to insurance premiums:

- 3% for direct written premiums;

³⁰ Legal risk includes, but is not limited to, exposure to fines, penalties, or punitive damages resulting from supervisory actions, as well as private settlements.

- 2% for premiums assumed;
- 3% for premiums ceded.

The 3% risk factor for direct written premiums and 2% risk factor for premiums assumed capture an insurer's operational risk exposure on new business and renewals.

The 3% risk factor for premiums ceded captures the operational risk remaining with the ceding insurer. While the insurer cedes a portion of its insurance risk exposure through reinsurance, the operational risk remains with the ceding insurer. Because the capital requirements for insurance liabilities (reference section 3.3) are calculated on the net amount of risk (net of reinsurance), the portion of operational risk requirement calculated as 10% of capital required does not account for the operational risk on the entire business of the insurer.

The following is the modified approach to calculating the premium component of the operational risk margin for insurers that are part of intra-group pooling arrangements:

- 3% for direct written premiums; plus
- the greater of:
 - 1% for premiums assumed;
 - 1% for premiums ceded.

Only reinsurance pooling arrangements between related Canadian federally or provincially regulated insurers qualify for this modified approach and a prior approval from the AMF is required in order to be allowed to apply this approach.

6.2.3 Year-over-Year Premium Growth Beyond a Threshold

Rapid growth, which is linked to acquisitions, new lines of business or changes to existing products or underwriting criteria, can create additional pressures on people and systems. Insurers with premium growth beyond a 20% threshold are subject to additional capital requirements for operational risk.

The premium growth requirement is calculated using gross written premiums, i.e. direct premiums written plus premiums assumed in the past 12 months. A 3% risk factor applies to the total amount of gross written premiums in the current year above the 20% growth threshold compared to the gross written premiums in the previous year. For example:

- assume that as a result of rapid growth, policy premiums increase by 50% from \$100 to \$150;
- then the amount above the 20% increase (\$30) is subject to an additional risk factor of 3%.

In the case of an acquisition, the total gross written premiums for a prior reporting period (before the acquisition) is the sum of the gross written premiums by the two separate entities, i.e. the sum of the acquiring and the acquired companies' gross written premiums. For example:

- assume that in Year T insurer A, with gross written premiums of \$100 for the 12 months period ending December 31, Year T-1, acquired insurer B with gross written premiums of \$50 for the same period;
- the merged insurer reported a total of \$225 in gross written premiums for the 12 months period ending December 31, Year T;
- the capital requirement for operational risk associated with rapid growth in premiums would be calculated as follows:
 - $3\% \times [\$225 - ((\$100 + \$50) \times 1.2)]$ or $3\% \times \$45 = \1.35

6.2.4 Cap on Operational Risk Margin

A 30% cap serves to dampen the operational risk margin for insurers that have high-volume/low-complexity business with high levels of reinsurance. The 30% cap is calculated in relation to total capital required, before the operational risk margin and diversification credit.

Chapter 7. ~~Risks Associated with Structured Settlements, Letters of Credit, Derivatives and Other Exposures~~Diversification Credit

Because losses arising across some risk categories are not perfectly correlated with each other, an insurer is not likely to incur the maximum probable loss at a given level of confidence 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.

7.1 Risk Aggregation and Diversification Credit

The diversification credit is calculated using the following formula:

$$\text{Diversification credit} = (A + I) - \sqrt{(A^2 + I^2 + 2 \times R \times A \times I)}$$

where:

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

- credit risk, including requirements for balance sheet assets and off-balance sheet exposures;
- market risk, including interest rate risk, foreign exchange risk, equity risk, real estate risk and other market risk exposures.

I: is the insurance risk margin, which is the sum of capital required for:

- unpaid claims and premium liabilities;
- margin required for unregistered reinsurance exposures;
- catastrophe risk.

R: is the correlation factor between A and I, determined as 50% for the diversification credit calculation.

Appendix 1: Qualifying criteria for category A capital instruments³¹

For an instrument to be included in capital available under category A, it must meet all of the following criteria:

1. Represents the most subordinated claim in liquidation of the insurer;
2. the investor is entitled to a claim on the residual assets that is proportional with its share of issued capital, after all senior claims have been paid in liquidation (i.e. has an unlimited and variable claim, not a fixed or capped claim);
3. the principal is perpetual and never repaid outside of liquidation (setting aside discretionary repurchases or other means of effectively reducing capital in a discretionary manner that is allowable under relevant law and subject to the prior approval of the AMF);
4. the insurer does not, in the sale or marketing of the instrument, create an expectation at issuance that the instrument will be bought back, redeemed or cancelled, nor do the statutory or contractual terms provide any feature that might give rise to such expectation;
5. distributions are paid out of distributable items (retained earnings included). The level of distributions is not in any way tied or linked to the amount paid in at issuance and is not subject to a contractual cap (except to the extent that an insurer is unable to pay distributions that exceed the level of distributable items or to the extent that distribution on senior ranking capital must be paid first);
6. there are no circumstances under which the distributions are obligatory. Non-payment is, therefore, not an event of default;
7. distributions are paid only after all legal and contractual obligations have been met and payments on more senior capital instruments have been made. This means that there are no preferential distributions, including in respect of other elements classified as the highest quality issued capital;
8. it is in the form of issued capital that takes the first and proportionately greatest share of any losses as they occur. Within the highest quality capital, each instrument absorbs losses on a going concern basis proportionately and *pari passu* with all the others;
9. the paid-in amount is recognized as equity capital (i.e. not recognized as a liability) for determining balance sheet solvency;
10. it is directly issued and paid-in³² and the insurer cannot directly or indirectly have funded the purchase of the instrument. Where the consideration for the shares is other than cash, the issuance of the common shares is subject to the prior approval of the AMF;

³¹ The criteria also apply to non-joint stock companies, such as mutuals, taking into account their specific constitution and legal structure. The application of the criteria should preserve the quality of the instruments by requiring that they are deemed fully equivalent to common shares in terms of their capital quality as regards loss absorption and do not possess features that could cause the condition of the insurer to be weakened as a going concern during periods of market stress.

³² Paid-in capital generally refers to capital that has been received with finality by the insurer, is reliably valued, fully under the insurer's control and does not directly or indirectly expose the insurer to the credit risk of the investor.

11. the paid-in amount is neither secured nor covered by a guarantee of the issuer or related enterprise³³ or subject to any other arrangement that legally or economically enhances the seniority of the claim;
12. it is only issued with the approval of the owners of the issuing insurer, either given directly by the owners or, if permitted by applicable law, given by the Board of Directors or by other persons duly authorized by the owners;
13. it is clearly and separately disclosed on the insurer's balance sheet, prepared in accordance with the relevant CGAAP.

³³ A related enterprise can include a parent company, a sister company, a subsidiary or any other affiliate. A holding company is a related enterprise irrespective of whether it forms part of the consolidated insurance group.

Appendix 2: Qualifying criteria for category B capital instruments

For an instrument to be included in capital available under category B, it must meet all of the following criteria:

1. Issued and paid-in in cash or, subject to the prior approval of the AMF, in property;
2. subordinated to policyholders, general creditors and subordinated debt holders of the insurer;
3. is neither secured nor covered by a guarantee of the issuer or related enterprise or other arrangement that legally or economically enhances the seniority of the claim vis-à-vis policyholders and creditors;³⁴
4. is perpetual, i.e. there is no maturity date and there are no step-ups³⁵ or other incentives to redeem³⁶;
5. may be callable at the initiative of the issuer only after a minimum of five years:
 - a. to exercise a call option, an insurer must receive prior approval of the AMF; and
 - b. an insurer must not do anything that creates an expectation that the call will be exercised; and
 - c. an insurer must not exercise a call unless:
 - i. it replaces the called instrument with capital of the same or better quality, including through an increase in retained earnings, and the replacement of this capital is done at conditions that are sustainable for the income capacity of the insurer³⁷; or
 - ii. the insurer demonstrates that its capital position is well above the supervisory target capital requirements after the call option is exercised.
6. any repayment of principal (e.g. through repurchase or redemption) must require approval of the AMF and insurers should not assume or create market expectations that such approval will be given;
7. dividend/coupon discretion:
 - a. the insurer must have full discretion at all times to cancel distributions/payments;³⁸

³⁴ Further, where an insurer uses a special purpose vehicle to issue capital to investors and provides support, including overcollateralization, to the vehicle, such support would constitute enhancement in breach of criterion #3 above.

³⁵ A step-up is defined as a call option combined with a pre-set increase in the initial credit spread of the instrument at a future date over the initial dividend (or distribution) rate after taking into account any swap spread between the original reference index and the new reference index. Conversion from a fixed rate to a floating rate (or vice versa) in combination with a call option without any increase in credit spread would not constitute a step-up.

³⁶ Other incentives to redeem include a call option combined with a requirement or an investor option to convert the instrument into common shares if the call is not exercised.

³⁷ Replacement issuances can be concurrent with, but not after, the instrument is called.

³⁸ A consequence of full discretion at all times to cancel distributions/payments is that “dividend pushers” are prohibited. An instrument with a dividend pusher obliges the issuing insurer to make a dividend/coupon payment on the instrument if it has made a payment on another (typically more junior) capital instrument or share. Such

- b. cancellation of discretionary payments must not be an event of default or credit event;
- c. the insurer must have full access to cancelled payments to meet obligations as they fall due;
- d. cancellation of distributions/payments must not impose restrictions on the insurer except in relation to distributions to common shareholders.
- 8. dividends/coupons must be paid out of distributable items;
- 9. the instrument cannot have a credit sensitive dividend feature, i.e., a dividend/coupon that is reset periodically based in whole or in part on the insurance organization's credit standing³⁹;
- 10. the instrument cannot contribute to liabilities exceeding assets if such a balance sheet test forms part of national insolvency law;
- 11. unless the insurer has obtained the prior approval of the AMF, the instrument must be classified as equity for accounting purposes⁴⁰;
- 12. neither the insurer nor a related enterprise over which the insurer exercises control or significant influence can have purchased the instrument, nor can the insurer directly or indirectly have funded the purchase of the instrument;
- 13. the instruments cannot have any features that hinder recapitalization, such as provisions that require the issuer to compensate investors if a new instrument is issued at a lower price during a specified timeframe;
- 14. if the instrument is not issued directly by the insurer (e.g. it is issued out of a special purpose vehicle or SPV), proceeds must be available immediately without limitation to an insurer in a form that meets or exceeds all of the other criteria for inclusion in capital available as specified under category B. For greater certainty, the only assets the SPV may hold are intercompany instruments issued by the insurer or a related enterprise with terms and conditions that meet or exceed criteria specified under category B. Put differently, instruments issued to the SPV have to fully meet or exceed all of the eligibility criteria under category B as if the SPV itself was an end investor – i.e. the insurer cannot issue a lower quality capital or senior debt instrument to an SPV and have the SPV issue higher quality capital instruments to third-party investors so as to receive recognition as qualifying capital under category B.

an obligation is inconsistent with the requirement for full discretion to cancel distributions/payments at all times. Furthermore, the term "cancel distributions/payments" means to forever extinguish these payments. It does not permit features that require the insurer to make distributions/payments in kind at any time.

³⁹ Insurers may use a broad index as a reference rate in which the issuing insurer is a reference entity; however, the reference rate should not exhibit significant correlation with the insurer's credit standing. If an insurer plans to issue capital instruments where the margin is linked to a broad index in which the insurer is a reference entity, the insurer should ensure that the dividend/coupon is not credit-sensitive.

⁴⁰ Such approval would only be granted where the insurer can demonstrate that the instrument otherwise meets the qualifying criteria provided for category B instruments.

Appendix 3: Qualifying criteria for category C capital instruments

For an instrument to be included in capital available under category C, it must meet all of the following criteria:

1. Issued and paid-in in cash or, with the prior approval of the AMF, in property;
2. subordinated to policyholders and general creditors of the insurer;
3. is neither secured nor covered by a guarantee of the issuer or related enterprise or other arrangement that legally or economically enhances the seniority of the claim vis-à-vis the insurer's policyholders and/or general creditors;
4. maturity:
 - a. minimum original maturity of at least five years;
 - b. recognition in capital available in the remaining five years before maturity will be amortized on a straight line basis;
 - c. there are no step-ups or other incentives to redeem.
5. may be callable at the initiative of the issuer only after a minimum of five years:
 - a. to exercise a call option, an insurer must receive the prior approval of the AMF; and
 - b. an insurer must not do anything that creates an expectation that the call will be exercised;⁴¹ and
 - c. an insurer must not exercise a call unless:
 - i. it replaces the called instrument with capital of the same or better quality, including through an increase in retained earnings, and the replacement of this capital is done at conditions that are sustainable for the income capacity of the insurer;⁴² or
 - ii. the insurer demonstrates that its capital position is well above the supervisory target capital requirements after the call option is exercised.
6. the investor must have no rights to accelerate the repayment of future scheduled payments (interest or principal), except in bankruptcy, insolvency, wind-up, or liquidation;
7. the instrument cannot have a credit sensitive dividend feature, i.e. a dividend/coupon that is reset periodically based in whole or in part on the insurance organization's credit standing⁴³.

⁴¹ An option to call the instrument after five years but prior to the start of the amortisation period will not be viewed as an incentive to redeem as long as the insurer does not do anything that creates an expectation that the call will be exercised at this point.

⁴² Replacement issuances can be concurrent with but not after the instrument is called.

⁴³ Insurers may use a broad index as a reference rate in which the issuing insurer is a reference entity; however, the reference rate should not exhibit significant correlation with the insurer's credit standing. If an insurer plans to issue capital instruments where the margin is linked to a broad index in which the insurer is a reference entity, the insurer should ensure that the dividend/coupon is not credit-sensitive.

8. neither the insurer nor a related enterprise over which the insurer exercises control or significant influence can have purchased the instrument, nor can the insurer directly or indirectly have funded the purchase of the instrument;
9. if the instrument is not issued directly by the insurer (e.g. it is issued out of an SPV), proceeds must be available immediately without limitation to the insurer in a form that meets or exceeds all of the criteria for inclusion specified under category C. For greater certainty, the only assets the SPV may hold are intercompany instruments issued by the insurer or a related enterprise with terms and conditions that meet or exceed the above category C criteria. Put differently, instruments issued to the SPV have to fully meet or exceed all of the eligibility criteria under category C as if the SPV itself was an end investor – i.e. the insurer cannot issue a lower capital or a senior debt instrument to an SPV and have the SPV issue higher quality capital instruments to third-party investors so as to receive recognition as qualifying capital under category C.

Appendix 1: Worksheet – Assets with a Capital Requirement of 100%

(in thousands of dollars)

Asset	Amount
Amounts receivable and recoverable from unregistered reinsurance agreements not covered by amounts payable to assuming reinsurers or by guarantee instruments from assuming reinsurers	
Interest in non-qualifying subsidiaries	
Interest in associates	
Interest in joint ventures with more than a 10% ownership	
Loans considered capital to non-qualifying subsidiaries	
Loans considered capital to associates	
Loans considered capital to joint ventures with more than a 10% ownership	
Deferred policy acquisition expenses that are not eligible for either the 0% capital factor or the 35% capital factor	
Net after-tax impacts of shadow accounting if the insurer has elected to use the shadow accounting option within IFRS	
Deferred tax assets that are not eligible for the 0% capital factor	
Goodwill and other intangible assets	
Other assets greater than 1% of total assets (other assets less than or equal to 1% of total assets, 35% capital factor)	
Self-insured retentions, included in other recoverables on unpaid claims, where the AMF requires collateral and no collateral has been received	
Net defined benefit pension plan asset, net of any associated deferred tax liability, and net of any amount of owned defined benefit pension plan surplus assets	
Other assets (as deemed required by the AMF)	
Total	

~~Note: This worksheet may be used to calculate assets with a capital requirement of 100%. The worksheet does not need to be filed with the AMF, although the AMF may ask for details supporting the amounts reported in the MCT.~~

Appendix 24: Instructions – Capital Required – Accident and Sickness Insurance

Mortality/morbidity risk for accident and sickness insurance is the risk that the liability assumptions about mortality and morbidity rates will be wrong.

To compute the mortality/morbidity component, a factor is applied to the measure of the exposure to the risk. The resulting values are added to arrive at the Unearned Premiums and Unpaid Claims margin requirements.

The factors used in deriving the risk component vary with the guaranteed term remaining in the exposure measure. The measure of the exposure to risk is as follows:

Risk	Measure of Exposure (before reinsurance)	Applicable Guaranteed Term
Disability Income, New Claims Risk	Annual net earned premiums	The length of the premium guarantee remaining
Disability Income, Continuing Claims Risk	Disability income net reserves relating to claims of prior years	The length of the benefit period remaining
Accidental Death and Dismemberment	Net amount at risk = the total <u>net</u> face amount of insurance less <u>the</u> policy <u>reserves-liabilities</u> (even if negative)	The period over which the mortality cost cannot be changed (limited to the remaining period to expiry or maturity)

Disability Income Insurance

The additional risks associated with non-cancellable guaranteed premium business should be recognized. As well, significant volatility is characteristic of disability income insurance, as compared with medical and dental insurance.

New Claims Risk

The unearned premium component relates to claims arising from the current year's coverage, and includes the risks of incidence and claims continuance. The factor applied to the measure of exposure is as follows:

Percentage of Annual Earned Premiums ⁴⁴		Length of the Premium Guarantee Remaining
Individually Underwritten	Other	
42 <u>15</u> %	42 <u>15</u> %	Less than or equal to 1 year
20 <u>25</u> %	31 <u>.25</u> %	Greater than 1 year, but less than or equal to 5 years
30 <u>37.5</u> %	40 <u>50</u> %	Greater than 5 years

Continuing Claims Risk

The unpaid claims component covers the risk of claims continuance arising from coverage provided in prior years. The factor applies to disability income claim reserves related to claims incurred in prior years, including the portion of the provision for incurred but unreported claims. The factor applied to the measure of risk exposure is as follows:

Duration of Disability			Length of Benefit Period Remaining
Less than or equal to 2 years	Greater than 2 years but less than or equal to 5 years	Greater than 5 <u>5</u> years	
45 <u>.0</u> %	3.0 <u>75</u> %	2.0 <u>5</u> %	Less than or equal to <u>1</u> year
6.0 <u>7.5</u> %	4.55 <u>.625</u> %	3.0 <u>75</u> %	Greater than 1 year but less than or equal to <u>2</u> years
8 <u>10</u> .0%	6.0 <u>7.5</u> %	45 <u>.0</u> %	Greater than 2 years or lifetime

⁴⁴ For travel insurance, annual earned premiums should be considered revenue premiums.

Accidental Death and Dismemberment

To compute the components for accidental death and dismemberment, the following factors are applied to the net amount at risk:

Type		Factor	Guaranteed Term Remaining
Participating	Group	0.015019%	Less than or equal to 1 year
	All other	0.030038%	All
Non-participating <i>Individual</i>	Adjustable	0.030038%	All
	All other	0.015019%	Less than or equal to 1 year
		0.030038%	Greater than 1 year but less than or equal to 5 years
		0.060075%	Greater than 5 years, whole life, and all life insurance continued on disabled lives without payment of premiums
Non-participating <i>Group</i>	All	0.015019%	Less than or equal to 1 year
		0.030038%	Greater than 1 year but less than or equal to 5 years
		0.060075%	Greater than 5 years, whole life, and all life insurance continued on disabled lives without payment of premiums

For participating business without meaningful dividends, and participating adjustable policies where mortality adjustability is not reasonably flexible, the factors for all other non-participating business should be used.

If current premium rates are significantly less than the maximum guaranteed premium rates, the guarantee term used is that applicable to the current rates.

Additional adjustments are ~~accorded~~ according to group insurance. They are as follows:

- the above factors may be multiplied by 50% for any group benefit that carries one of the following features: 1) a “guaranteed no risk”; 2) deficit repayment by policyholders, or 3) “hold harmless” agreement where the policyholder has a legally enforceable debt to the insurer;
- no component is required for “Administrative services only” group cases where the insurer has no liability for claims.

Only “all cause” policies solicited by mail should be included in this section for automobile and common carrier accidental death and dismemberment. Specific accident perils included in

accidental death and dismemberment ~~in~~ policies solicited by mail, and “free” coverages on premium credit card groups, should be included in the “Other Accident and Sickness Benefits” section.

Other Accident and Sickness Benefits

New Claims Risk

The component requirement is ~~42~~15% of annual earned premiums.

Continuing Claims Risk

The component requirement is ~~40~~12.5% of the provision for incurred but unpaid claims relating to prior years. The use of prior year ~~ss~~ avoids a double component requirement for incurred but unpaid claims arising from coverage purchases by premiums paid in the current year.

Special Policyholder Arrangements

For group insurance policies, deposits in excess of liabilities may be used to reduce the component requirement to a minimum of zero. Such deposits must be:

- made by policyholders;
- available for claims payment (e.g. claim fluctuation and premium stabilization reserves, and accrued provision for experience refunds); and
- returnable, net of applications, to policyholders on policy termination.

Appendix 35: Worksheet – Capital Required – Accident and Sickness Insurance

(In thousands of dollars)

	01	02	03
	Earned Premiums	Factor	Margin
A. Unearned Premiums Margin			
(i) Disability Income Insurance			
Length of premium guarantee remaining			
Individually underwritten < 1 year		4215.0%	
1 – 5 years		2025.0%	
> 5 years		30.037.5%	
Other < 1 year		4215.0%	
1 – 5 years		25.031.25%	
> 5 years		4050.0%	
(ii) Accidental Death and Dismemberment		Note	
(iii) Other Accident and Sickness Benefits		4215.0%	
(iv) <u>DPAE – Commissions (balance sheet value in col. 01)</u>		<u>45.0%</u>	
Total Unearned Premium Margin			

	01	02	03
	Unpaid Claims (prior years)	Factor	Margin
B. Unpaid Claims Margin			
(i) Disability Income Insurance			
Duration of disability < 2 years			
Length of benefit period remaining			
< 1 year		45.0%	
1 – 2 years		6.07.5%	
> 2 years		810.0%	
Duration of disability 2 - 5 years			
Length of benefit period remaining			
< 1 year		3.075%	
1 – 2 years		4.55.625%	
> 2 years		6.07.5%	
Duration of disability > 5 years			
Length of benefit period remaining			
< 1 year		2.05%	
1 – 2 years		3.075%	
> 2 years		45.0%	
(ii) Accidental Death and Dismemberment		Note	
(iii) Other Accident and Sickness Benefits		40.012.5%	
Other Adjustments			
Total Unpaid Claims Margin			

Note: This worksheet may be used to calculate capital required for accident and sickness insurance. The worksheet does not need to be filed with the AMF, although the AMF may ask for details supporting the amounts reported in the MCT.

Appendix 4: Worksheet – Capital required – Interest Rate Risk
(In thousands of dollars)

	Fair Value (01)	Modified or Effective Duration (02)	Dollar Fair Value Change (03) = (01) × (02) × Δy	Dollar Fair Value Change (04) = (01) × (02) × (-Δy)
Interest Rate Sensitive Assets				
Term deposits				
Bonds and Debentures				
Commercial paper				
Loans				
Mortgages				
Mortgage backed and asset backed securities				
Preferred shares				
Other				
Total			A	A
Interest Rate Sensitive Liabilities				
Net unpaid claims and adjustment expenses				
Net premium liabilities				
Total			B	B
Allowable Interest Rate Derivatives	Notional Value (01)	Effective Duration (02)	Dollar Fair Value Change (Δy) (03)	Dollar Fair Value Change (-Δy) (04)
Long positions				
Short positions				
Total			C	C
Capital Requirement for Δy Shock Increase			D = Maximum (0, A - B + C)	
Capital Requirement for Δy Shock Decrease				E = Maximum (0, A - B + C)
Interest Rate Risk Margin			F = Maximum (D, E)	

~~where Δy = interest rate shock factor~~

~~Note: This worksheet may be used to calculate capital required for interest rate risk. The worksheet does not need to be filed with the AMF, although the AMF may ask for details supporting the amounts reported in the MCT.~~

Appendix 5: Worksheet—Capital Required—Structured Settlements, Letters of Credit, Derivatives and Other Exposures

(In thousands of dollars)

	Possible Credit Exposure	Movable Hypothechs and Guarantees	Credit Conversion Factor	Capital Factor	Capital required
	(01)	(02)	(03)	(04)	(05) = (01- 02)x03x04
Structured Settlements					
Government-grade			50%	0.0%	
Rated A- and higher			50%	0.5%	
Rated BBB+ and lower			50%	4.0%	
Derivatives					
Government-grade			100%	0.0%	
Rated A- and higher			100%	0.5%	
Rated BBB+ and lower			100%	4.0%	
Other Exposures					
Government-grade			Note	0.0%	
Rated A- and higher			Note	2.0%	
Rated BBB+ and lower			Note	8.0%	
Letters of Credit	Face Value		Credit Conversion Factor	Capital Factor	Capital Required
	(01)		(03)	(04)	(05) = 01x04
Unregistered reinsurance			100%	0.5%	
Policyholders (self-insured retentions)			100%	0.5%	
Guarantee instruments other than letters of credit					Capital Required (05)
Less: reduction in capital required for excess guarantees (ref. chapter 4)					
Total Capital Required					

Note : This worksheet may be used to calculate capital required for structured settlements, letters of credit, derivatives, and other exposures. The worksheet does not need to be

⁴⁵ —Guarantee instruments other than letters of credit are subject to the same capital factors as those applied to similar assets owned by the insurer (reference chapter 3).

filed with the AMF, although the AMF may ask for details supporting the amounts reported in the MCT.