Office of the Superintendent of Financial Institutions Canada
Bureau du surintendant des institutions financières Canada

Guideline

Subject: **Branch Adequacy of Assets Test (BAAT)**
Branches of Foreign Property and Casualty Insurance Companies

No: **A-2** **Date:** **January 2007**

Introduction

Subsection 608(1) of the Insurance Companies Act requires Branches of Foreign Property and Casualty Insurance Companies (Branches) to maintain an adequate margin of assets in Canada over liabilities in Canada. The BAAT Guideline[1] is not made pursuant to subsection 608(3) of the Act. However, the minimum and supervisory target standards set out in this Guideline provide the framework within which the Superintendent assesses whether a Branch of a foreign P&C insurance company operating in Canada maintains an adequate margin of assets in Canada over liabilities in Canada. Notwithstanding that a Branch may meet these standards the Superintendent may direct the Branch to increase the margin of assets in Canada over liabilities in Canada under subsection 608(4).

This guideline outlines the framework for Branches using a risk-based formula for the minimum margin to be maintained by Branches, in Canada, and defines the assets that are available to meet the minimum standard.

[1] Pursuant to the *Assets (Foreign Companies) Regulations*, this Guideline also applies to foreign life companies in respect of the insuring of risks that fall within a class of insurance other than life insurance, accident and sickness insurance and loss of employment insurance.

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BAAT Supervisory Target

The BAAT ratio compares net assets available to margin required as calculated by applying factors for specified risks. Branches of foreign P&C insurers are required, at a minimum, to maintain a BAAT ratio of 100%.

OSFI believes that each institution should establish a target level that provides a cushion above minimum requirements, both to cope with volatility in markets and economic conditions, innovations in the industry, consolidation trends and international developments, and to provide for risks not explicitly addressed in the calculation of policy liabilities in the BAAT. Such risks include systems, data, strategic, management, fraud, legal and other operational and business risks. An adequate target level provides additional capacity to absorb unexpected losses beyond those covered by the minimum BAAT and to address additional capital needs through ongoing market access.

OSFI expects each institution to establish a target level, and maintain ongoing assets available, at no less than the supervisory target of 150% BAAT. However, the Superintendent may, on a case-by-case basis, establish in consultation with an institution an alternative supervisory target level based upon an individual institution's risk profile.

Institutions are required to inform OSFI immediately if they anticipate falling below the supervisory target capital level and to lay out their plans, for OSFI approval, to return to their target level. OSFI will consider any unusual conditions in the market environment when evaluating institutions' performance against their target level.

Branch Adequacy of Assets Test
for Branches of Foreign P&C Insurance Companies

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Overview and Available Assets

The Branch Adequacy of Assets Test for Branches of Foreign P&C Insurance Companies

This Tab provides an overview of the BAAT for Branches of foreign P&C insurance companies. More detailed information on specific components of the calculation is contained under subsequent tabs. For BAAT purposes, all amounts are net of marine business.

Risk-Based Framework

The risk-based framework assesses the riskiness of assets, policy liabilities, and and structured settlements, letters of credit, derivatives and other exposures, by applying varying factors. Branches are required to meet a test of minimum Net Assets Available over Margin Required.

Available Assets

For BAAT purposes, Available Assets are calculated as follows:

1. Excess of Vested Assets over Net Liabilities. Net Liabilities is equal to Total Liabilities net of: Recoverables from Reinsurers; Other (allowable) Recoverables on Unpaid Claims; Unearned Commissions; and, a specified portion of Deferred Policy Acquisition Expenses. This reduction for Deferred Policy Acquisition Expenses (DPAE) is equal to the sum of:

   a) 65% of the net of Deferred Commissions and Unearned Commission (if the net value is zero or negative, there is no adjustment for this item); and,

   b) 100% of Deferred Premium Taxes.

Plus

2. Receivables from Agents and Policyholders (including Brokers).

Less

3. Amounts receivable and recoverable from unregistered reinsurers to the extent that they are not covered by deposits held as security from assuming reinsurers (reference Tab 3-2).

4. Accumulated net after-tax fair value gains /losses on available-for-sale loans.

Margin Required

The BAAT margin requirement is the sum of amounts required for:

i.) Assets (reference Tab 2).

ii.) Unearned Premiums, Premium Deficiencies and Unpaid Claims (Policy Liabilities – reference Tab 3).

iii.) Catastrophe Reserves and Additional Policy Provisions (reference Tab 3).

iv.) Margin for Reinsurance Ceded to Unregistered Reinsurers (reference Tab 3).

v.) Structured Settlements, Letters of Credit, Derivatives and Other Exposures (reference Tab 4).

Notwithstanding the stated requirements, in any case where the Superintendent believes that the treatment is inappropriate, a specific charge will be determined.

Minimum Requirements

Branches will be expected to maintain Net Assets Available equal to at least the minimum Margin Required. The Superintendent may prescribe a higher requirement, including for an individual Branch, taking into account such factors as operating experience, diversification of the asset or insurance portfolios, and retention limits.

Interpretation of Results

The BAAT establishes the minimum margin requirement for a branch operating in Canada to protect its policyholders. It is one of several indicators that the Superintendent uses to assess financial condition and should not be used in isolation for ranking and rating insurers.

TAB 2

Margin Required for Assets

Description of Asset Risks

The margin 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 margin requirement for assets, branches must apply a factor to the balance sheet values of vested and other admitted assets. For vested loans, factors are applied to amortized cost. The resulting values are added together to arrive at the margin required for assets.

Counterparty Risk

This Tab applies to assets (reference Tab 2) and to structured settlements, letters of credit, derivatives and other exposures (reference Tab 4).

The three rating categories used for assigning factors to assets, structured settlements, letters of credit, derivatives and other exposures, or where appropriate collateral and guarantees, are:

1. Government Grade

Government obligations include securities issued by, loans made to, or securities or loans guaranteed by, and accounts receivable from:

- i.) the federal government of Canada or an agent of the Crown;
- ii.) a provincial or territorial government of Canada or one of its agents;
- iii.) a municipality or school corporation in Canada; and,
- iv.) the central government of a foreign country where:
  - – the security is rated AAA or, if not rated,
  - – the long-term sovereign credit rating of that country is AAA.

2. Investment Grade

A security is treated as Investment Grade if its rating (excluding securities that are included in the Government Grade category) meets or exceeds the rating listed in the table below. If a rating is not available, or where the rating of the security, or guarantor, is less than the rating listed in the table, it will be assigned a Not-Investment Grade factor.

A Branch wishing to use the rating of another rating agency should seek the approval of the Superintendent.

Asset/Guarantor Ratings

Rating Agency	Commercial Paper	Bonds & Debentures	Preferred Shares
	(at least as high as)		
Moody's Investor Service	P-1	A	Aa
Standard and Poor's Corporation	A-	A	AA
Dominion Bond Rating Service	R-1 (low)	A	Pfd-2

3. Not-Investment Grade

Includes any item not included in the Government Grade or Investment Grade categories.

In the case of an asset, or exposure, backed by a guarantee (reference Tab 2-4), the long-term issuer credit rating or, in the case of a government, the long-term sovereign risk rating, of the guarantor is used to determine the risk category. In all cases, when a credit rating is not available, the relevant Not-Investment Grade factor is applied.

Asset Factors

0%   Factor

- Cash.
- Obligations[2] of federal, provincial, territorial and municipal governments, and school corporations in Canada.
- 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 AAA-rated central governments and central banks, or obligations of organizations with the guarantee of the central government.
- Obligations backed by a Government Grade guarantor including, for example, residential mortgages insured under the National Housing Act (NHA) or equivalent provincial mortgage insurance program, and NHA mortgage-backed securities that are guaranteed by the Canada Mortgage and Housing Corporation.
- Instalment Premiums (not yet due).

0.5%   Factor

- Term deposits, bonds, and debentures (including commercial paper), rated Investment-Grade, that mature or are redeemable in less than one year.
- Unearned Premiums recoverable from registered insurers (reference Tab 3-2).

2%   Factor

- Term deposits, bonds, and debentures (including commercial paper), rated Investment Grade, that mature or are redeemable in one year or more.
- Investment income due and accrued.
- Unpaid Claims and adjustment expenses recoverable from registered insurers (reference Tab 3-2).

[2] Includes securities, loans and accounts receivable.

*4%	Factor*

- Term deposits, bonds, and debentures (including commercial paper), rated Not-Investment Grade, that mature or are redeemable in less than one year.
- Investment Grade preferred shares.
- First mortgages on one- to four-unit residential dwellings.
- Accounts Receivable, outstanding less than 60 days, from Policyholders, Agents, and Brokers, including Instalment Premiums.

*8%	Factor*

- Term deposits, bonds, and debentures (including commercial paper), rated Not-Investment Grade, that mature or are redeemable in one year or more.
- Accounts Receivable, outstanding 60 days or more, from Policyholders, Agents and Brokers, including Instalment Premiums.
- Real-estate for a Branch's own use.
- Commercial mortgages.
- The amount by which the vested balance sheet amount of foreign currency assets exceeds the amount of liabilities denominated in the same currency.

*10%	Factor*

- Other loans.

*15%	Factor*

- Common shares.
- Preferred shares rated Not-Investment Grade.
- Investments in real estate (not for a Branch's own use).
- Mortgages secured by undeveloped land (i.e., 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.
- Other Investments, excluding derivative related amounts (per page 40.80 of P&C-2 Instructions: includes investments ***other than*** term deposits, bonds and debentures, loans, shares, or investment in real estate). Margin requirements for derivative-related amounts included in Other Investments are set out in Tab 4 and are reported on page 30.80, with margins required for structured settlements, letters of credit, derivatives and other exposures.

- Other (allowable) Recoverables on Unpaid Claims: includes Salvage and Subrogation assets and Self Insured Retentions, to the extent permitted as Available Assets.

Variable Factors

- Investments in securitized assets, mutual funds or other similar assets must be broken down by type of investment (bond, preferred shares, etc., as per the P&C-2 Instructions), reported on the applicable line, and assigned the appropriate factor relating to the investment. If these investments are not reported on a prorated basis, then the factor of the riskiest asset being securitized, or held in the fund, is assigned to the entire investment.

Derivatives

- Margin requirements for derivatives are set out in Tab 4.

General

- Where information is not available to determine the grade of the counterparty, the counterparty is deemed to be Not-Investment Grade.
- Where information is not available to determine the redemption/maturity of an asset, Branches must use the category with the highest factor for that asset (e.g., use the "deposits, bonds and debentures, expiring or redeemable in more than one year" category where that information is not available for a particular asset).

Treatment of Collateral and Guarantees

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

Collateral

Recognition of collateral in reducing the margin required for assets, structured settlements, letters of credit, derivatives and other exposures, is limited to cash or securities meeting the Government Grade or Investment Grade criteria (reference Tab 2-2). Where a rating is not available for the asset, exposure, or counterparty where applicable, no reduction in the required margin is permitted.

Any collateral 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 eligible collateral will be assigned the weight given to the collateral.

Guarantees

Investments (principal and interest) or exposures that have been explicitly, irrevocably and unconditionally guaranteed by a guarantor whose long-term issuer credit rating or, in the case of a government, the long-term sovereign credit rating, satisfies the Government Grade or Investment Grade rating criteria, may attract the factor allocated to a direct claim on the guarantor where the effect is to reduce the risk. Guarantees provided by a parent or an affiliate are not eligible for this treatment on the basis that guarantees within a corporate group are not considered to be a substitute for the required margin.

Where a rating is not available for the investment, exposure, or guarantor where applicable, no reduction in the required margin is permitted.

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 factor of the guarantor (see examples below).

Example One: Asset (reference Tab 2)

To record a $100,000 Investment Grade bond due in 10 years that has a Government Grade guarantee of 90%, the insurer would report a book value of $90,000 ($100,000 x 90%) on the Government Grade line and a book value of $10,000 ($100,000 - $90,000) on the Investment Grade line on page 30.81 under Term Deposits, Bonds and Debentures, Expiring or redeemable in more than one year. The Margin Required on the Government Grade line is $0 ($90,000 x 0.0%). The Margin Required on the Investment Grade line is $200 ($10,000 x 2.0%) for a total margin requirement of $200. An example of the calculation, assuming no other assets, is provided in the chart below.

	Factor (%)	Book Value	Margin Required
Investments:			
Term Deposits, Bonds And Debentures:			
- Expiring or redeemable in more than one year:			
Government Grade	0.0%	$90,000	$0
Investment Grade	2.0%	$10,000	$200
Not-Investment Grade	8.0%		
Total		$100,000	$200

Example Two: Type 1 Structured Settlement (reference Tab 4)

To record a $3,000 Type 1 Structured Settlement rated Not-Investment Grade, backed by collateral or a guarantee of $2,000 from an Investment Grade counterparty, the insurer would report a Possible Credit Exposure of $3,000 and Collateral and Guarantees of negative $2,000 on the Not Investment Grade line, and Collateral and Guarantees of $2,000 on the Investment Grade line under Structured Settlements on appendix A-2.

The Margin Required on the Not Investment Grade line is $20 (($3,000 - $2,000) x 50% x 4%). The Margin Required on the Investment Grade line is $5 ($2,000 x 50% x .5%) for a total margin requirement of $25. An example of the calculation, assuming no other exposures, is provided in the chart below.

	Possible Credit Exposure (01)	Collateral and Guarantees (02)	Credit Conversion Factor (%) (03)	Factor (%) (04)	Margin Required (05)
Structured Settlements:					
Government Grade					
Investment Grade		$2,000	50%	0.5%	$5
Not Investment Grade	$3,000	($2,000)	50%	4.0%	$20
Total					$25

TAB 3

Margin Required for Policy Liabilities (excludes marine business)

Description of Risks for Policy Liabilities

This risk component reflects the insurer's risk profile by individual classes of insurance and results in specific margin requirements on policy liabilities. The risk associated with policy liabilities is divided into four parts:

- i.) variation in claims provisions (Unpaid Claims);
- ii.) possible inadequacy of provisions for Unearned Premiums;
- iii.) possible inadequacy of provisions for premium deficiencies; and
- iv.) occurrence of catastrophes (Earthquake and Other).

Note that, for Branches, policy liabilities exclude Marine business.

Margins for Unearned Premiums, Premium Deficiencies and Unpaid Claims

Given the uncertainty that balance sheet provisions will be sufficient to cover the anticipated liabilities, margins are added to cover the potential shortfall. The margins establish 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 a regulatory perspective, these margins are included to take into account possible abnormal negative variations in the amounts calculated by actuaries, given the fact that the margins added by actuaries in their valuation are primarily intended to cover expected variations.

Margins on Unpaid Claims and Unearned Premiums are applied to the net amount at risk (i.e., net of reinsurance, Salvage and Subrogation, and Self Insured Retentions) by class of insurance. The Unearned Premiums margin is applied to the greater of the net Unearned Premiums or 50% of the net written premiums in the last 12 months. The margins are as follows:

Class of Insurance	Margin on Unearned Premiums	Margin on Unpaid Claims
Personal property & commercial property	8%	5%
Automobile - Liability & personal accident	8%	10%
Automobile - Other	8%	5%
Liability	8%	15%
Accident and Sickness	See Appendix A	See Appendix A
Mortgage	See Appendix B	15%
All others	8%	15%

A margin of 8% applies to premium deficiencies.

Catastrophes

Earthquake

Refer to the OSFI Earthquake Exposure Sound Practices guideline.

Nuclear

Branches issuing nuclear risk policies, are required to record an additional provision of 100% of net premiums written, less commissions. In the absence of meaningful statistical data on the severity and frequency of losses, the Superintendent considers it appropriate for insurers to reverse this provision after twenty years.

Mortgage Insurance

Refer to the "Additional Policy Provisions" section of Appendix A-3.

Reinsurance Recoverables

Registered Reinsurers

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

The factor applied to recoverables from registered reinsurers is treated as a combined weight under the BAAT, reflecting both the credit risk and the risk of variability or insufficiency of Unpaid Claims and Unearned Premiums. A 2% factor is to be applied to Unpaid Claims recoverable from registered reinsurers and a 0.5% factor is to be applied to Unearned Premiums recoverable from registered reinsurers.

Unregistered Reinsurers

Recoverables from Unregistered Reinsurers, on the balance sheet, have a Margin Required amount equal to the amount calculated on page 70.39 of the P&C-2.

Amounts recoverable from unregistered reinsurers, as reported on the balance sheet, are deducted from available assets to the extent that they are not covered by deposits held as security from assuming reinsurers. Amounts payable to assuming reinsurers may be deducted from amounts recoverable only where there is a legal and contractual right of offset. The deduction is calculated on page 70.39 of the P&C 2, and reported on page 30.80.

The margin for unregistered reinsurance is calculated on page 70.39 and reported on the “Reinsurance Ceded to Unregistered Insurers” line on page 30.80. The margin is 10% of reserves ceded to unregistered reinsurers. The margin requirement for each unregistered reinsurer may be reduced to a minimum of 0 by letters of credit and by deposits held as security that are in excess of the amount of ceded reserves, both divided by 1.5.

Margin Required for Structured Settlements, Letters Of Credit, Derivatives and Other Exposures

Description of Risks for Structured Settlements, Letters Of Credit, Derivatives and Other Exposures

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

The risk to a Branch associated with structured settlements, letters of credit, derivatives and other exposures, and the amount of margin required to be held against this risk is:

i.) The value of the instrument (Possible Credit Exposure; reference Tab 4-2) at the reporting date;

ii.) Less: the value of eligible collateral security or guarantees (Collateral and Guarantees; reference Tab 2-4);

iii.) Multiplied by: a factor reflecting the nature and maturity of the instrument (Credit Conversion Factor; reference Tab 4-3);

iv.) Multiplied by: a factor reflecting the risk of default of the counterparty to a transaction (Credit Risk; reference Tab 4-4).

Refer to Appendix A-2, Worksheet for Margin Required for Derivatives, Structured Settlements, Letters of Credit, and Other Items.

Possible Credit Exposure

The possible credit exposure related to structured settlements, letters of credit, derivatives and other exposures varies depending on the type of instrument.

Structured Settlements

The possible credit exposure for a Structured Settlement is the current cost of the instrument.

Instruments included in this Tab are "Type 1" Structured Settlements that are not recorded as liabilities on the balance sheet. For details on the types of Structured Settlements, refer to Special Topics, section IV of the Instructions to the P&C-2, and to Guideline D5: Accounting for Structured Settlements.

Letters of Credit

The possible credit exposure for a Letter of Credit is the face value of the instrument.

Letters of Credit (LOCs) may include, for example:

i.) LOCs serving as direct credit substitutes backing financial claims where the risk of loss to the Branch is directly dependent on the creditworthiness of the counterparty.

ii.) LOCs acting as transaction-related contingencies associated with the ongoing business activities of a counterparty. The risk of loss to the reporting institution depends on the likelihood of a future event that is independent of the creditworthiness of the counterparty.

Derivatives

The possible credit 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. Instruments traded on exchanges are excluded where they are subject to daily receipt and payment of cash variation margins.

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

i.) the total replacement cost (obtained by "marking to market") of all contracts with positive value; and

ii.) an amount for potential future credit exposure (or "add-on"). This is calculated by multiplying the notional principal amount by the following factors.

Derivative "Add-On" Factors

Residual Maturity	**Interest Rate**	**Exchange Rate**	**Equity**	**Other Instruments**
One year or less	0.0%	1.0%	6.0%	10.0%
Over one year	0.5%	5.0%	8.0%	12.0%

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 remaining maturities of more than one year that also meet the above criteria, the add-on factor is subject to a floor of 0.5%.

The notional principal amount is:

i.) 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 exposure[3].

ii.) 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; or

iii.) for contracts with multiple exchanges of principal, the sum of the remaining payments.

Contracts not covered by columns 2 – 4 in the above table are to be treated as "other instruments" for the purpose of determining the add-on factor.

[3] 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.

Other Exposures

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

Commitments

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

i.) extending credit in the form of loans or participations in loans, lease financing receivables, mortgages, letters of credit, guarantees or loan substitutes; or

ii.) 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 date on which:

i.) the commitment is scheduled to expire, or

ii.) the insurer can, at its option, unconditionally cancel the commitment.

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 for accounting purposes, the securities remain on the balance sheet. Given that these securities are temporarily assigned to another party, the 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 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 preferential factor, the asset would be recognized as collateral and the factor would be reduced accordingly.

Credit Conversion Factors

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

For Letters of Credit and other exposures, the weighted average of the credit conversion factors, described below, for all of these instruments held by the Branch, should be entered in the appropriate cell on the Worksheet for Derivatives, Structured Settlements, Letters Of Credit and Other Items (Appendix A-2).

100% Factor

- Guarantees, letters of credit, or other equivalent irrevocable obligations serving as financial guarantees. Generally, these are considered direct credit substitutes where the risk of loss to the Branch is directly dependent on the creditworthiness of the counterparty.
- Commitments that mature in one year or more, and the Branch 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:
  - i.) 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 as well as on indices, etc.).
  - ii.) Equity contracts (forwards; swaps; purchased options; and similar derivative contracts based on specific parameters as well as on indices, etc.).
  - iii.) 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 as well as on indices, etc.).
  - iv.) Precious metals (except gold) and other commodity contracts (forwards; swaps; purchased options; and similar derivative contracts based on specific parameters as well as on indices, etc.).
  - v.) Other derivative contracts based on specific parameters as well as on indices (such as Catastrophe Insurance Options and Futures).

- Forward Asset 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 reported elsewhere (provide details).

50% Factor

- Structured settlements that are not recorded as liabilities on the balance sheet (refer to Section IV, Special Topics of the P&C-2 and to Guideline D5: Accounting for Structured Settlements).
- Performance-related and non-financial guarantees such as performance-related standby letters of credit (e.g., representing obligations backing the performance of non-financial or specific commercial contracts or undertakings and not general financial obligations). Performance-related guarantees specifically exclude items relating to non-performance of financial obligations.
- Commitments that mature in one year or more, and the insurer cannot cancel or withdraw the commitment at any time without notice and where their drawdown is uncertain.

0% Factor

- Commitments that mature in less than one year and other commitments where the insurer has full discretion to unconditionally cancel or withdraw the commitment at any time without notice[4].

[4] Other than any notice required under legislation or other court rulings that require notice.

Factors

Structured settlements, letters of credit, derivatives and other exposures are assigned a factor ranging from 0% to 8.0%, subject to their counterparty risk rating (reference Tab 2-2). The factors to be applied are:

0% Factor

- Exposures rated Government Grade.

0.5% Factor

- Structured Settlements rated Investment Grade.
- Letters of Credit rated Investment Grade.
- Derivatives rated Investment Grade.

2.0% Factor

- "Other Items" rated Investment Grade.

4.0% Factor

- Structured settlements not rated Government Grade or Investment Grade.
- Letters of Credit not rated Government Grade or Investment Grade.
- Derivatives not rated Government Grade or Investment Grade.

8.0% Factor

- "Other Items" not rated Government Grade or Investment Grade.

- END -

Appendix A-1: Capital Required - Accident and Sickness Business

Accident and Sickness requirements determined by actuaries in their valuations are primarily intended to cover expected variations in these requirement based on assumptions about mortality and morbidity. Margins on Unearned Premium 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 Premium margin is calculated by applying a factor to annual Earned Premiums. Generally, the factor varies with the length of the premium guarantee remaining. 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.

This Appendix includes a worksheet for calculating the Margin Required for Accident and Sickness Business. Instructions for completing the worksheet are included in the section below. The total requirement calculated on the worksheet is included in the amount reported on line 22, Unearned Premiums/Unpaid Claims, of Page 30.70.

Instructions for Completing the Worksheet

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

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

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	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 net face amount of insurance less policy reserves (even if negative)	the period over which the mortality cost cannot be changed (limited to the remaining period to expiry or maturity)

1) Disability Income Insurance

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

Unearned Premium Margin

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[1]		**Length of Premium Guarantee Remaining**
Individually Underwritten	**Other**	
12%	12%	less than or equal to 1 year
20%	25%	greater than 1 year, but less than or equal to 5 years
30%	40%	greater than 5 years

Unpaid Claims Margin

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 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 years**	
4.0%	3.0%	2.0%	less than or equal to 1 year
6.0%	4.5%	3.0%	greater than 1 year but less than or equal to 2 years
8.0%	6.0%	4.0%	greater than 2 years or lifetime

[1] For travel insurance, annual earned premiums should be considered revenue premiums.

2) Accidental Death and Dismemberment

To compute the components for Accidental Death and Dismemberment, the following factors are applied to the net amount at risk:

<table>
<tr><th colspan="2">Type</th><th>Factor</th><th>Guaranteed Term Remaining</th></tr>
<tr><td rowspan="2">Participating</td><td>Group</td><td>.015%</td><td>less than or equal to 1 year</td></tr>
<tr><td>All other</td><td>.030%</td><td>all</td></tr>
<tr><td rowspan="4">Non-participating
Individual</td><td>Adjustable</td><td>.030%</td><td>all</td></tr>
<tr><td rowspan="3">All other</td><td>.015%</td><td>less than or equal to 1 year</td></tr>
<tr><td>.030%</td><td>greater than 1 year but less than or equal to 5 years</td></tr>
<tr><td>.060%</td><td>greater than 5 years, whole life, and all life insurance continued on disabled lives without payment of premiums.</td></tr>
<tr><td rowspan="3">Non-participating
Group</td><td rowspan="3">All</td><td>.015%</td><td>less than or equal to 1 year</td></tr>
<tr><td>.030%</td><td>greater than 1 year but less than or equal to 5 years</td></tr>
<tr><td>.060%</td><td>greater than 5 years, whole life, and all life insurance continued on disabled lives without payment of premiums.</td></tr>
</table>

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 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 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.

3) Other Accident and Sickness Benefits

Unearned Premium Margin

The component requirement is 12% of annual earned premiums.

Unpaid Claims Margin

The component requirement is 10% of the provision for incurred but unpaid claims relating to prior years. The use of prior years 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 deposits in excess of liabilities, excluding the liability for such deposits, may reduce the component requirement on any policy 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 A-2: Worksheets

Please click on this link to view the Worksheets.

Appendix A-3: Capital Required - Mortgage Insurance

This Appendix currently applies only to federal insurers. It replaces all existing federal Memoranda on the subject of capital requirements for mortgage insurance policies on classes of loans defined in Section 2 of this Appendix.

1. Definitions

In this Appendix,

"**commercial loan**" means a loan on a property used primarily for commercial purposes;

"**conventional loan**" means a loan where the ratio of the initial mortgage amount to the lower of the appraised value or sale price, as at the date of the loan, does not exceed 75%;

"**high-ratio loan**" means a loan that is not a conventional loan;

"**home-ownership loan**" means a loan on a residential property with 1 to 4 units (inclusive), without regard to owner occupation;

"**industrial loan**" means a loan on a property used primarily for industrial purposes;

"**initial mortgage amount**" in respect of a mortgage that is not a first mortgage, means the total amount of the outstanding balance of the first mortgage, and the amount of the other mortgage at the date of commencement of risk under the policy;

"**multiple residential loan**" means a loan on a property with more than 4 units used primarily for residential purposes;

"**variable payment mortgage**" means a mortgage on which the payments to be made by the borrower increase in some pre-determined manner and which the regulator has agreed may be included under this definition.

2. Classes of Loans

The following classes of loans are hereby defined:

Type of Property	1st Mortgages Conventional / High Ratio		2nd Mortgages Conventional / High Ratio		Variable Payment Mortgage
Home-ownership	HCI	HH1	HC2	HH2	HV1
Multiple residential	MC1	MH1	MC2		
Commercial	CCl	CH1	CC2		
Industrial	IC1	IH1	IC2		

Note that the first letter denotes the type of property. The second letter denotes the type of mortgage. The suffix denotes the ranking of the mortgage.

3. Mortgage Insurance Margin

a) A company shall, in respect of its mortgage insurance business covered by this Appendix, maintain a mortgage insurance margin as stipulated below, adjusted for:

i) various classes of mortgages by factors prescribed in paragraph (b);

ii) various settlement options by factors prescribed in section 8;

iii) the margin for commitments likely to result into policies in the following 60 days; and

iv) the investment income discount factor prescribed in paragraph (c).

This margin replaces the unearned premium margin required in the Minimum Capital Test (MCT) for Canadian Property and Casualty Insurance Companies.

	Mortgage Insurance Margin per $100 of Initial Mortgage Amount	
Completed Policy Duration in Years	**Homeownership**	**Others**
0	$0.616	$1.10
1	$0.711	$1.10
2	$0.694	$1.07
3	$0.644	$0.98
4	$0.496	$0.87
5	$0.346	$0.73
6	$0.194	$0.54
7	$0.106	$0.33
8	$0.051	$0.10
9	$0.030	Nil
10	Nil	Nil

The “Others” category consists of Multiple Residential, Commercial and Industrial loans.

b) The following adjustment factors will apply to the mortgage insurance margin for various classes of mortgages:

Class		Factors
HC1	Homeownership conventional 1st mortgages	
	Maximum loan to value ratio up to 50%	.04
	Maximum loan to value ratio over 50% to 65%	.08
	Maximum loan to value ratio over 65% to 75%	.10
HH1	Homeownership high ratio 1st mortgages	
	Maximum loan to value ratio over 75% to 80%	.30
	Maximum loan to value ratio over 80% to 85%	.60
	Maximum loan to value ratio over 85% to 90%	.90
	Maximum loan to value ratio over 90% to 95%	1.20
	Maximum loan to value ratio over 95% to 100%, and	
	Average credit score greater than or equal to 700	1.35
	Average credit score between 680 and 699	1.40
	Average credit score between 660 and 679	1.45
	Average credit score less than 660	1.75
MCI	Multiple residential conventional 1st mortgages	1.00
MH1	Multiple residential high ratio 1st mortgages	1.50
MC2	Multiple residential conventional 2nd mortgages	1.00
CCI	Commercial conventional 1st mortgages	1.00
CHI	Commercial high ratio 1st mortgages	1.50
CC2	Commercial conventional 2nd mortgages	1.50
ICI	Industrial conventional 1st mortgages	1.00
IH1	Industrial high ratio 1st mortgages	1.50
IC2	Industrial conventional 2nd mortgages	1.50

For homeownership second mortgages, the factor used should be 90% of the first mortgage factor.

For homeownership variable payment mortgage, the factor used should be 110% of the non-variable payment factor.

c) The above requirements shall be adjusted by application of an investment income factor defined as follows:

The income factor = 1 - 2.5(x - .05) where x denotes the investment yield of the company per unit of assets during the previous 12 months. The investment income factor shall not be less than 0.875.

For the purposes of calculating the yield, the investment income will be calculated as *Income* (20.30.32.01) plus the *share of net income (loss) of subsidiaries and affiliates* (20.30.41.01) of the Annual Return, while assets are the *Assets Available for Test Purposes* or an equivalent amount.

d) A company shall also maintain, a margin on the basis prescribed herein in respect of commitments likely to result into policies in the following 60 days. As regards the balance of commitments, the company will have to satisfy the regulator that capital would be available at the time when policies are likely to be issued. Companies will be required to justify the factors used in the calculations.

e) Notwithstanding anything to the contrary stated herein, the mortgage insurance margin required pursuant to this section shall not be less than 0.15% of the initial mortgage amount on the total business of the company.

4. Unearned Premiums

a) A company shall maintain unearned premiums on the scales prescribed below:

	Unearned Premium Reserve as Percent of Single Premium Policy Reserve in Years					
Completed Policy Duration in Years	**5 or less**	**over 5 and less than 10**	**over 10 and less than 15**	**over 15 up to 25**	**over 25 up to 30**	**over 30 up to 40**
0	100.0	100.0	100.0	100.0	100.00%	100.00%
1	75.0	80.0	85.0	88.0	88.50%	89.00%
2	50.0	60.0	65.0	70.0	70.50%	71.00%
3	25.0	40.0	45.0	52.0	52.50%	53.00%
4	12.5	20.0	30.0	35.0	35.50%	36.00%
5	0.0	10.0	18.0	23.0	23.50%	24.00%
6		5.0	10.0	14.0	16.00%	16.50%
7		3.0	6.0	8.0	12.00%	12.25%
8		2.0	4.0	6.0	8.00%	8.25%
9		1.0	2.0	3.0	5.00%	5.50%
10		0.0	1.5	2.5	3.00%	3.50%
11			1.0	2.0	2.50%	2.75%
12			0.50	1.5	2.00%	2.10%
13			0.25	1.0	1.50%	1.70%
14			0.125	0.50	1.00%	1.30%
15			0.000	0.40	0.50%	0.90%
16				0.35	0.45%	0.70%
17				0.30	0.40%	0.65%
18				0.25	0.35%	0.50%
19				0.20	0.30%	0.40%
20				0.15	0.25%	0.35%
21				0.12	0.22%	0.32%
22				0.09	0.19%	0.29%
23				0.06	0.16%	0.26%
24				0.03	0.13%	0.23%
25				0.00	0.10%	0.20%
26					0.08%	0.18%
27					0.06%	0.16%
28					0.04%	0.14%
29					0.02%	0.12%
30					0.00%	0.10%
31						0.09%
32						0.08%
33						0.07%
34						0.06%
35						0.05%
36						0.04%
37						0.03%
38						0.02%
39						0.01%
40						0.00%

b) Renewable policies, other than for homeownership, subject to the first premium not less than 1.25% (1% for conventional loans) of the initial sum insured and a renewal premium of not less than 0.25% of the sum insured issued for an initial term (or a renewal term) not exceeding 5 years:

   i) The unearned premiums shall be maintained in accordance with the scale for policies over 5 and less than 10 years in (a) above; and

   ii) The unearned premiums in respect of any renewal premium shall be calculated pro-rata over the greater of the following periods:

      a. the renewal period; and
      b. three years.

5. Additional Policy Provisions

A company shall maintain additional policy provisions as follows:

	Additional Policy Reserve as Per Cent of Single Premium Original Term of the Policy			
Completed Policy Duration in Years	**Up to 5 yrs**	**Over 5 to 10 yrs**	**Over 10 to 15 yrs**	**Over 15 to 40 yrs**
1	2.0	3.0	4.0	4.0
2	1.0	2.0	4.0	4.0
3	0.5	1.0	3.5	4.0
4		1.0	3.0	5.5
5		0.5	3.0	6.0
6		0.5	2.0	5.0
7		0.0	1.0	3.5
8			1.0	2.0
9			1.0	1.5
10			1.0	1.5
11			0.0	1.0
12				1.0
13				0.5
14				0.5
15				0.5
16				0.5
17				0.5
18				0.5
19				0.5
20				0.0
21				0.0
22				0.0
23				0.0
24				0.0
25				0.0

Note: For the purposes of this paragraph, the term of a policy for term 10 to 15 years described in paragraph 4(b) shall be treated as 10 years.

These factors are derived based on the assumption that the premium rates charged are adequate. Should these rates change over time, additional policy provisions factors will have to be readjusted. The regulator should be advised whenever a company is making a material change to its rates charged.

6. Other Policy Durations

Factors for Calculating Requirements of:

a) mortgage insurance margin;
b) Unearned Premiums; and
c) Additional Policy Provisions

at policy durations other than those specified in this Appendix shall be obtained by simple interpolation.

7. Premium Deficiency

A company shall maintain a premium deficiency calculated as set out below for the different grouping of policies.

The premium deficiency in respect of a grouping of policies shall be the excess, if any, of:

a) the sum of the future claims and adjustment expenses, future servicing expenses and reinsurance costs;

over

b) the Unearned Premiums.

8. Optional Settlement Clause

a) The mortgage insurance margin required (as specified in section 3) will be adjusted for the settlement option specified in the mortgage insurance policy by the following proportion.

Mortgage Loan to Original Value	Settlement Option[1]	Factor Applicable to the Mortgage Insurance Margin
0 to 80%	10%	73%
0 to 85%	15%	80%
0 to 90%	20%	84%
0 to 95%	25%	100%
0 to 50%	100%	100%
Over 50% to 65%	100%	100%
Over 65% to 75%	100%	100%
Over 75% to 80%	100%	105%
Over 80% to 85%	100%	110%
Over 85% to 90%	100%	115%
Over 90% to 95%	100%	140%
Over 95% to 100%	100%	150%

b) A company may in respect of Homeownership loans issue policies with 100% coverage, subject to the following conditions:

i) The company shall include in all such policies a clause giving the company the option to pay claims on a deficiency basis without being required to settle the claim on the basis of the company taking over title to the mortgaged property; and

ii) At any time when the real estate holdings of a company exceed 25% of its total invested assets, the company shall settle claims on such policies only on a deficiency basis, unless the company has received written permission from the regulator permitting it to settle such claims on the basis of taking over title to the mortgaged property.

c) For the purpose of this section invested assets will include those that are required to be reported in the Annual Return, data points 20.10.01.01, 20.10.03.01 and 20.10.04.01 to 20.10.09.01, plus any other items that may be approved by the regulator.

d) For proportional coverage[2], the factor used to adjust the mortgage insurance margin is obtained by multiplying the proportional coverage percentage by the applicable factor from the above table for a 100% settlement option. For example, a factor of 55% (50% times 110%) would apply for proportional coverage on a mortgage with an original loan to value ratio of 85%.

[1] Settlement Option - the percentage refers to the maximum claim measured as a percentage of the original loan amount. For example, a 25% settlement option on a $200,000 mortgage means that the insurer is liable for up to the first $50,000 of the lender's loss.

[2] Proportional Coverage Option - refers to the percentage of a lender's loss that is payable by the insurer. For example, with a 50% proportional coverage option, the insurer is liable for 50% of the lender's loss.

9. Date of Recognition of Claim

Provision for losses in respect of mortgages in default will be made on the earlier of:

a) the date five months after the date of the first default; and
b) the date when the claim is submitted to the company.

10. Policies Under Which Premium Credits for Existing Policies are Given

For the purposes of this Appendix, the Unearned Premiums and Additional Policy Provisions shall be maintained based on the premium ignoring credits, if any, allowed for an existing policy.