



FINAL

**PROVISION FOR ADVERSE DEVIATIONS
PROPERTY & CASUALTY INSURANCE COMPANIES**

**COMMITTEE ON PROPERTY & CASUALTY
INSURANCE FINANCIAL REPORTING**

FINAL VERSION AS APPROVED BY COUNCIL

NOVEMBER 1993

EFFECTIVE JANUARY 1, 1994



Canadian Institute of Actuaries

Institut Canadien des Actuaire

MEMORANDUM

PROVISION FOR ADVERSE DEVIATIONS (PROPERTY & CASUALTY)

TO: All Members of the Canadian Institute of Actuaries
FROM: David J. Oakden, Vice-President
DATE: November 22, 1993
SUBJECT: **Provision for Adverse Deviations for Property & Casualty Insurance Companies**

The exposure draft of this standard was distributed to all members in May 1993.

Following the Institute's interim rules for due process, the Committee on Property & Casualty Insurance Financial Reporting and the Committee on the Adoption of Standards of Practice approved modifications of the exposure draft based on comments from members during and subsequent to the exposure period. These modifications related to the Application Section and to the minimum margin factors.

At its November 1993 meeting, Council gave final approval to the standard which, effective for fiscal years ending after January 1, 1994, becomes part of the Institute's standards of practice. Although this standard will not officially apply to 1993 fiscal years, Council strongly recommends early implementation where liabilities reflect the time value of money.

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PROVISION FOR ADVERSE DEVIATIONS

1. APPLICATION

This standard of practice applies to all members who are valuing the policy liabilities of a property/casualty insurance company operating in Canada, domestic or foreign. In particular, this standard of practice supersedes Section 5.05 of the Recommendations for Property-Casualty Insurance Company Financial reporting issued January 1990.

2. OVERVIEW

The concepts of provision for adverse deviations and discounting of liabilities for interest are not new. There is a common assumption in financial reporting that undiscounted policy liabilities implicitly include a provision for adverse deviations which equals the amount of the discount. The goal is to explicitly determine these components, thereby adding to the quality of financial reporting.

The assumption is that the provision for adverse deviations is added to discounted liabilities. The provision for adverse deviations should be reduced appropriately if added to undiscounted liabilities.

The provision for adverse deviations is an integral component of the policy liabilities of the company.

There are three major valuation variables in any property-casualty insurance valuation:

- claims development
- reinsurance recovery
- interest rate

This standard of practice transforms the general principles of Section 5.05 of the Recommendations for Property-Casualty Insurance Company Financial Reporting into a series of considerations for each valuation variable listed above.

These considerations relate both to the determination of:

- the expected value of the valuation variable
- the margin related to the valuation variable

Those considerations which relate exclusively to the margin are noted specifically. The considerations are illustrative, not necessarily exhaustive.

It should be noted that the expected value should be the member's best estimate. For example, the determination of the expected value of the interest rate should include provision for asset-default risk. The margin related to the interest rate should include consideration for defaults in excess of those in the expected value.

For each valuation variable, the member is to determine a margin required in excess of the expected value based on the considerations listed as they relate to the block of business and the company's particular situation.

Each margin is calculated by the selection of a factor adjustment for each valuation variable. A suggested range is provided based on low margin and high margin situations. Selection of a margin higher than the maximum may be justified in unusual circumstances and should be explained by the member.

Low margin and high margin situations are intended to describe the extremes of a continuum of probable situations. In many cases, the specifics of the situation will result in the member placing the company between the two extremes.

Some considerations, which are defined below as significant considerations, preclude the selection of a margin near the low end of the range.

3. DEFINITIONS

Provision for adverse deviations: The additional reserves required by adding margins to the valuation variables.

Margin: The incremental change in valuation variable commensurate with the uncertainty in the variable.

The margin is defined for the two extreme situations of the low and high margins.

A review of the consideration mentioned in the low and high margin situations will be the basis for the member to determine the level of the margin.

Valuation variable factors: The margins, once determined are applied in the following manner:

Variable	Factor
Claims development	A multiplicative factor which increases gross and net outstanding claims.
Reinsurance recovery	A multiplicative factor which decreases ceded outstanding claims recoverable.
Interest rate	An additive factor which decreases the interest rate

Significant considerations: Significant considerations preclude the selection of a margin near the low end of the range. These considerations are specifically identified.

Ceded claims ratio: (case incurred reported to assuming company + IBNR estimated by ceding company) divided by (earned premium ceded)

Balance sheet exposure: Ceded unearned premium + outstanding loss recoverable from assuming company + amounts due from assuming company - amounts due to assuming company - cash or securities held as security from assuming company.

4. CLAIMS DEVELOPMENT VARIABLE

This section is divided into three broad areas of considerations. The member should take into account all three areas when determining whether the company is in a low or high margin situation with respect to claims development for a particular block of business.

A. Considerations Related to Company Practices

- 1) Consistency in claims handling procedures and personnel
 - specific objectives and guidelines for setting case reserves

- caseload of the average adjuster over the past several years
 - shift from employment of company adjusters to independent adjusters or vice versa
 - shift in procedures for reporting or nonreporting of small or trivial claims
 - shift toward or away from the vigorous defense of suits over the past several years
 - change in the timing of payment of external loss adjustment expenses
 - change in dates on which the books are closed
- 2) System changes
- changes in coding procedures which would affect the data supplied
 - addition/deletion of kind of loss codes
 - change in definition of claim count
 - change from a manual to automated claims processing system
 - introduction of new claims processing system
 - changes to accounting and/or statistical systems
- 3) Changes in case reserve estimation
- significant changes in guidelines for setting and reviewing case reserves over the past several years
 - caseload of the average adjuster over the past several years
 - shift from employment of company adjusters to independent adjusters or vice versa
 - shift toward or away from the vigorous defense of suits over the past several years
 - changes described in claim department bulletins to the field issued over the past several years in which details of the changes in claims procedures are provided

Description of the High Margin Situation

- relative adequacy of case reserves has varied significantly (*significant consideration*)
- system, management or other changes significantly affecting the consistency of claim recording procedures (*significant consideration*)
- systems or other changes significantly affecting claims handling procedures (unless there is a mechanism for accurately assessing the effects of such changes)
- rapid turnover in claims personnel
- no standard procedures for establishing case reserves

Description of the Low Margin Situation

- stable claims handling environment
- few significant changes in claims staff and handling procedures
- no major systems changes
- case reserves established in a consistent and responsive manner

B. Considerations Related to the Data on which the Estimate is Based

- 1) Number of years (time periods) of past experience on which expected development is based (margin only)
- 2) Volume of business in each year
- 3) Changes in volume of business over last five to seven years
- 4) Changes in mix of business over last five to seven years
- 5) Homogeneity of data grouping
- 6) Stability of historical development (margin only)
- 7) Potential impact of large individual claims

Description of the High Margin Situation

- rapid growth or significant loss of direct or assumed business (*significant consideration*)
- lack of homogeneity in data grouping (*significant consideration*)

- new insurance exposure with relatively little history of development (for example, new line of business, change in policy wording or interpretation on existing line of business)
- high turnover of ceding companies (reinsurers)

Description of the Low Margin Situation

- at least a five-year history of credible development
- homogeneity in data grouping

C. Considerations Related to Line of Business

- 1) Length of time over which potential development might take place from reporting of new losses
 - development on known claims
 - re-opening of closed claims
- 2) Likelihood of external changes which may significantly affect development
- 3) Net retention of the company for the line of business
- 4) Change in policy form

Description of the High Margin Situation

- lines affected by recent legislative changes where the effect on settlements is difficult to quantify (*significant consideration*)
- long tailed lines
- significant liability exposure in areas where judiciary has been, or is likely to be, active
- relatively high percentage of excess of loss business

Description of the Low Margin Situation

- fast closing claims with little time for development
- lines with relatively little government involvement - no recent legislative change
- little liability exposure where legislative changes or legal precedents could affect future settlements
- relatively high percentage of proportional business and quick settlement of claims (reinsurers)

Selection of Margin

After reviewing the considerations outlined above, determine the company's margin situation and select an appropriate margin. For claims liabilities, the margin increases the gross and net claims liability. For premium liabilities, the margin increases the expected loss ratio.

The margin for premium liabilities need not be the same as that for claims liabilities, since the conditions affecting premium liabilities may not be the same as for claims liabilities.

In the same way, the margin may vary by accident year and by block of business.

The member should be guided by the following range:

Low margin factor	2.5%
High margin factor	15.0%

When two or more of the significant considerations exist, the member should use at least the average of the high and low situations.

5. REINSURANCE RECOVERY VARIABLE

The margin for reinsurance recovery should take into account the following considerations:

- 1) Ceded claims ratio
 - by treaty or accident year
 - by class of business (property proportional, property excess of loss, auto casualty excess, etc.)

- 2) Potential problem reinsurers
- reinsurers subject to regulatory restrictions in home jurisdiction
 - claim or coverage disputes with any reinsurers
 - reinsurance contract or cover note for the period ending on the date of valuation that is not signed
 - reinsurance receivable accounts overdue
 - any reinsurer with a history of not settling accounts promptly
- Note:** The actuary can rely on the primary company's auditor for these items. If there is no auditor, the actuary must decide on the materiality of each item, and if material, these items must be investigated.
- sources of reinsurance (affiliated companies, registered companies not affiliated, unregistered companies not affiliated)
- 3) Balance sheet exposure for each assuming company

Description of the High Margin Situation

- a high proportion of related party reinsurance
- consistently high ceded claims ratio and/or high ceding commission rate (*significant consideration*)
- unregistered reinsurance with large balance sheet exposure (*significant consideration*)
- reinsurers under receivership or liquidation in its home jurisdiction (*significant consideration*)

Description of the Low Margin Situation

- reinsurance provided by companies with strong financials
- low claims ratio with respect to ceded business

Selection of Margin

After reviewing the considerations outlined above, determine the company's margin situation and select an appropriate margin. For claims liabilities, the margin decreases ceded outstanding claims. For premium liabilities, the margin decreases reinsurance ceded.

The margin for premium liabilities need not be the same as that for claims liabilities, since the reinsurers and conditions affecting premium liabilities may not be the same as for claims liabilities.

In the same way, the margin may vary by treaty or accident year and by block of business.

The member should be guided by the following range:

Low margin factor	0.0%
High margin factor	15.0%

When two or more of the significant considerations exist, the member should use at least the average of the high and low situations.

6. INTEREST RATE VARIABLE

The margin for interest rate should take into account the following considerations:

- 1) Investment portfolio (if interest rate based on company asset portfolio)
- concentration versus diversification of investments (geographic, industry, etc.) (margin only)
 - types of investments (bonds, stocks, mortgages, etc.)
 - types of risks (interest/dividend, capital/value)
 - quality of assets

- 2) Investment climate
 - economic conditions
 - capital gains and losses
 - investment expenses
 - liquidity
 - tax rate of investment income
- 3) Method of valuing assets
- 4) Matching of investments to claims payments patterns
 - cash flow of assets and obligations
 - length of claim payment period
 - predictability of claim payment pattern
 - notional allocation of assets

Description of the High Margin Situation

- high proportion of poor quality assets (*significant consideration*)
- high reliance on capital gains; excessive capital losses (*significant consideration*)
- long claim settlement period and volatile claim payment pattern (*significant consideration*)
- interest rate not based on company asset portfolio (*significant consideration*)
- "unbalanced" investment portfolio - in terms of concentration, type of investment, type of risk, liquidity of investment, term of investment
- prolonged period of forecasted negative cash flow
- information for asset default risk is of low quality

Description of the Low Margin Situation

- "balanced" investment portfolio
- high proportion of quality assets
- few or no capital losses
- short and predictable claim payment period

Selection of Margin

After reviewing the considerations outlined above, determine the company's margin situation and select an appropriate margin. For claims liabilities and premium liabilities, the margin is an additive factor which decreases the interest rate.

The margin for premium liabilities need not be the same as that for claims liabilities, since conditions affecting premium liabilities may not be the same as for claims liabilities.

In the same way, the margin may vary by block of business.

The member should be guided by the following range:

Low margin factor	50 basis points (0.5%)
High margin factor	200 basis points (2.0%)

When two or more of significant considerations exist, the member should use at least the average of the high and low situations.