

## *Research Paper*

# Disclosure Requirements IFRS 4 – Insurance Contracts for P&C Insurers

## Committee on Property and Casualty Insurance Financial Reporting

October 2010

Document 210067

*Ce document est disponible en français*  
© 2010 Canadian Institute of Actuaries

*Research papers do not necessarily represent the views of the Canadian Institute of Actuaries. Members should be familiar with research papers. Research papers do not constitute Standards of Practice and therefore are not binding. Research papers may or may not be in compliance with Standards of Practice. Responsibility for the manner of application of Standards of Practice in specific circumstances remains that of the members in the life insurance practice area.*

## Memorandum

**To:** All Property and Casualty Insurance Practitioners

**From:** Tyrone G. Faulds, Chair  
Practice Council  
Pierre Dionne, Chair  
Committee on Property and Casualty Insurance Financial Reporting

**Date:** October 4, 2010

**Subject:** **Research Paper – Disclosure Requirements IFRS 4 – Insurance Contracts for P&C Insurers**

For property and casualty (P&C) insurers, the two primary implications of IFRS 4 Phase I, which is due to be implemented in Canada on January 1, 2011, are related to the classification of insurance contracts and enhanced disclosures in financial statements.

The Committee on Property and Casualty Insurance Financial Reporting has drafted this research paper to

- identify the disclosures that are relevant to P&C insurers,
- analyze the considerations of the disclosure requirements, and
- provide guidance for disclosure, including examples.

The paper presents the actual disclosure requirements from the IFRS paper, followed by the committee's comments and suggestions. It is followed by an appendix which offers an illustrative example.

In accordance with the Institute's Policy on Due Process for the Adoption of Guidance Material Other than Standards of Practice, this research paper has been prepared by the Committee on Property and Casualty Insurance Financial Reporting, and has received approval for distribution from the Practice Council on September 16, 2010.

If you have any questions or comments regarding this research paper, please contact Pierre Dionne, Chair, Committee on Property and Casualty Insurance Financial Reporting, at his CIA Online Directory address, [pdionne@ccr.fr](mailto:pdionne@ccr.fr).

TGF, PD

**TABLE OF CONTENTS**

Introduction.....	4
Disclosure Requirements .....	4
Appendix: Illustrative Example of Disclosure Notes .....	13
1. Summary of Significant Accounting Policies.....	13
2. Critical Accounting Estimates and Judgements.....	14
3. Management of Insurance and Financial Risk.....	15
3.1 Insurance risk .....	15
3.2 Financial risk .....	16
4. Insurance Liabilities and Reinsurance Assets.....	18
4.1 Assumptions, Changes in Assumptions and Sensitivity .....	20
4.2 Movements in Insurance Liabilities and Reinsurance Assets .....	22

## Introduction

IFRS 4 Phase I (IFRS 4) will be implemented on January 1, 2011 in Canada. For property and casualty (P&C) insurers, the two primary implications of IFRS 4 are related to (i) the classification of insurance contracts and (ii) enhanced disclosures in financial statements. This research paper addresses financial statements disclosures required by IFRS 4, specifically sections 36 to 39.

The adoption of IFRS 4 on January 1, 2011 will require comparisons with 2010. Thus, many insurers will begin to gather much of the information requirements during 2010. The goal of this research paper is to assist actuaries, who will be working with insurers in preparing the IFRS 4 disclosures, in the information-gathering process during 2010 and 2011.

The specific objectives of this research paper are to

- identify the disclosures that are relevant to P&C insurers,
- analyze the considerations of the disclosure requirements, and
- provide guidance for disclosure, including examples.

Financial reporting is the responsibility of the insurer. Each insurer will choose to make disclosure in a manner appropriate to its own organization's style and the characteristics of its operations.

Much of the information, both qualitative and quantitative, that will be required by IFRS 4 is already available in the Appointed Actuary report or the supporting documentation. However, this information may not be in a format appropriate for the required disclosure.

For ease of reading, this document refers to annual reporting; all concepts presented are equally applicable to interim reporting.

In this paper, the actual disclosure requirements from the IFRS 4 paper are presented in a box. Under the box, we have provided our comments and suggestions. In the appendix, an illustrative example is provided with the corresponding disclosure requirements noted on the side of the page. It may also be useful for readers to review financial statements of publicly traded European companies, which have already reported under IFRS 4.

## Disclosure Requirements

- 36 An insurer shall disclose information that identifies and explains the amounts in its financial statements arising from insurance contracts.
- 37 To comply with paragraph 36, an insurer shall disclose:
- 37(a) its accounting policies for insurance contracts and related assets, liabilities, income and expense.

As the focus of these disclosures is accounting policies, it is anticipated that the accountants preparing the insurer's financial statements will have primary responsibility for these disclosures. However, the actuary may want to provide input, or may be asked for input.

These disclosures will likely consist of a qualitative description without requirements for quantitative support.

In the disclosures responding to paragraph 37(a), we expect that insurers would consider including discussions of the following items.

Description of the contract classification. The disclosures will describe the insurer's conclusions on the classification of its products. The classification of a contract as an insurance contract or a financial instrument is defined in IFRS 4. The key concept in defining an insurance contract is the transfer of risk. The actuary is referred to the CIA's educational note [Classification of Contracts under International Financial Reporting Standards](#) (June 2009) for a discussion of this topic.

Description of the accounting policies used for

- premiums,
- acquisition costs,
- unearned premium,
- claims incurred,
- claims handling cost,
- discounting,
- provision for adverse deviations (PfAD),
- liability adequacy test,
- salvage and subrogation,
- reinsurance,
- adjustment for risk and uncertainty, and
- judgment (i.e., critical accounting policies).

Not all categories are necessarily applicable to all insurers. There may be other categories that will be required for a particular insurer.

37(b) the recognised assets, liabilities, income and expense (and, if it presents its statement of cash flows using the direct method, cash flows) arising from insurance contracts. Furthermore, if the insurer is a cedant, it shall disclose:

- (i) gains and losses recognised in profit or loss on buying reinsurance; and
- (ii) if the cedant defers and amortises gains and losses arising on buying reinsurance, the amortisation for the period and the amounts remaining unamortised at the beginning and end of the period.

With respect to 37(b), the insurer may disclose the breakdown of its policy liabilities into the following components:

- case outstanding claim provision for both unpaid claims and loss adjustment expenses (LAE),
- provision for claims and LAE incurred but not reported (IBNR) including
  - pure IBNR (if analyzed separately),
  - development on known claims (if analyzed separately),
  - total IBNR (if analyzed on a combined basis),
  - effect of discounting, and
  - provision for adverse deviations (PfAD),

salvage and subrogation (if analyzed separately),  
provision for unearned premium, and  
premium deficiency.

The extent of disclosure will vary based on the methodologies and approaches used to estimate policy liabilities for each insurer.

To address the assets related to insurance contracts, the claim liabilities can be shown separately on a gross and net of reinsurance basis, the ceded values may or may not be shown separately.

Changes in the value of claim liabilities from year-end to year-end, claim payments in the year, and the earning of premiums during the year will all affect the insurer's income. The actuary may assist the insurer in preparing these related disclosures.

The disclosure for profit or loss arising from reinsurance may not be necessary in most circumstances. Typical P&C reinsurance transactions do not generate profit or loss upon purchase of the protections. Disclosure may be required in relation to retroactive reinsurance, portfolio transfer, commutation or financial/finite reinsurance.

37(c) the process used to determine the assumptions that have the greatest effect on the measurement of the recognised amounts described in (b). When practicable, an insurer shall also give quantified disclosure of those assumptions.

We expect that disclosures prepared to meet the requirements of 37(c) will focus on the actuarial projection methodologies used to estimate claim and premium liabilities. For many insurers, such disclosures would include an identification of the methods used, key assumptions underlying each method, a description of how such assumptions were derived, and commentary regarding changes in methodologies and assumptions from the prior year-end. Disclosures would also address the adjustments from an expected value to an actuarial present value (i.e., adjustments for time value of money and provisions for adverse deviations).

The most common projection methodologies used by insurers to estimate unpaid claims include

claims development,  
Bornhuetter-Ferguson,  
expected claims ratio,  
frequency-severity,  
Cape Cod, and  
Berquist-Sherman.

Typically, descriptions of the mechanics of each approach and the key assumptions are included in the text of the Appointed Actuary's report. The new CAS textbook *Estimating Unpaid Claims Using Basic Techniques*<sup>1</sup> is another valuable resource that actuaries can turn to for detailed descriptions of the primary methods, including key assumptions.

With respect to disclosures regarding key assumptions, there will likely be great variability in the extent of detail provided by insurers. Some insurers may simply state that they rely on historical experience of the organization as well as insurance industry benchmarks (if applicable) to determine key factors, such as age-to-age factors and initial expected loss ratios. Other insurers

---

<sup>1</sup> [http://www.casact.org/pubs/Friedland\\_estimating.pdf](http://www.casact.org/pubs/Friedland_estimating.pdf)

may only state that the methodologies and key assumptions are consistent with the prior year's analysis. Others may provide significant detail about the experience periods used for key lines of business, the types of average factors reviewed, and the processes for determining expected claims ratios. As noted in the introductory comments to this research paper, each insurer will choose to disclose in a manner appropriate to its own organization's style and the characteristics of its operations.

In times of minimal change in the organization, the environment, and the claims experience, quantitative analyses would not necessarily be required to support these disclosures. However, if there have been significant changes in the insurer's operations, management philosophy and policy, or claims experience that affect the methodologies and assumptions for evaluating policy liabilities, the insurer would likely provide more extensive disclosures. The extent of change and its effect on the actuarial analysis will drive the depth of detail required for both qualitative descriptions and potentially quantitative summaries.

37(d) the effect of changes in assumptions used to measure insurance assets and insurance liabilities, showing separately the effect of each change that has a material effect on the financial statements.

The insurer is expected to disclose changes in assumptions that have a material effect on the policy liabilities from one valuation date to the next. As with all disclosures, the format and extent of detail would be specific to the circumstances of each insurer. Qualitative disclosures for each material change could include

- identification of the change,
- rationale for the change,
- effect of the change, and
- observed trends.

If changes in assumptions have no material effect on the policy liabilities from one valuation date to the next, the disclosures could simply state that this is the case.

Based on subsection 1710 of the CIA's Standards of Practice, needed assumptions are defined as follows.

- .01 *The needed assumptions for a calculation consist of model assumptions, data assumptions, and other assumptions.*
- .02 *There is a model assumption for each of the matters that the actuary's model takes into account. Those matters should be sufficiently comprehensive for the model reasonably to represent reality.*
- .03 *Data assumptions are the assumptions, if any, needed to relieve insufficiency or unreliability in the obtainable data.*
- .04 *The other assumptions are the assumptions about the legal, economic, demographic, and social environment on which the model and data assumptions depend.*

Examples of model assumptions include, but are not limited to

- type(s) of method(s) selected for projecting ultimate claims and LAE (e.g., development technique, Bornhuetter-Ferguson technique, expected claims ratio),

key assumptions of selected method(s) including reporting patterns and initial expected loss ratios,  
approach for the review of premium liabilities, and  
discounting assumptions including payment patterns, discount rate, and provision for adverse deviations (PfAD).

Examples of data assumptions include, but are not limited to,

source of data, and  
use of industry data.

Examples of other assumptions include, but are not limited to,

trend and inflation,  
rate level change, and  
impact of tort reform.

It is not expected that the insurer would disclose the effect of changes in each individual assumption. For example, insurers are not expected to disclose each change in age-to-age factors. However, if the change in the cumulative pattern is material to the projection of ultimate claims, and thus claim liabilities, then the insurer may choose to disclose this change and its effect.

The quantitative effect on carried values of policy liabilities of unique situations, such as the provision for HST or the release of the final decision regarding provincial tort reform, would likely be disclosed.

A Source of Earnings report could form the basis for disclosure responding to the requirements of 37(d).

37(e) reconciliations of changes in insurance liabilities, reinsurance assets and, if any, related deferred acquisition costs.

To address “reconciliations of changes in insurance liabilities,” the insurer would disclose the movement in claim liabilities from the prior year-end. The movement would be reported separately for prior accident/underwriting years and the current accident/underwriting year.

Since claims liabilities are presented on an actuarial present value basis (i.e., discounted for the time value of money and including provision for adverse deviations), the change in the amount of the discount could be disclosed separately to facilitate the reconciliation.

The movement in premium liabilities from one year-end to the next would also be disclosed. The unearned premium at year-end is usually derived from the unearned premium at the beginning of the year, the premiums written and earned during the year, and, in some circumstances, adjustments during the year.

By reporting changes on a gross of reinsurance, net of reinsurance, and ceded basis, the insurer could address the requirements for disclosure related to “reinsurance assets”.

To address the disclosure requirement related to “deferred acquisition costs”, the insurer would disclose whether there are material changes, from one year to the next, in the deferred acquisition costs that would be related to the reduction of the equity in the unearned premium.



- 38 An insurer shall disclose information that enables users of its financial statements to evaluate the nature and extent of risks arising from insurance contracts.
- 39 To comply with paragraph 38, an insurer shall disclose:
- 39(a) its objectives, policies and processes for managing risks arising from insurance contracts and the methods used to manage those risks.
- 39(b) [deleted]

It is expected that disclosures responding to the requirements in 39(a) will be prepared primarily by chief risk officers, risk managers, or chief financial officers of insurers. These disclosures are intended to provide qualitative information about the nature of the risks arising from insurance contracts. The actuary might be requested to assist in the preparation of these disclosures.

Insurers would provide descriptions of their primary risks as well as the techniques used to manage such risks. Summaries of reinsurance may be an important part of these disclosures.

Examples of financial and non-financial risks that could be considered are

- operational risk,
- hazard/insurance risk,
- catastrophe risk,
- concentration risk,
- pricing risk,
- reserving risk,
- other product risk,
- reinsurance risk,
- regulatory risk,
- market risk,
- interest rate risk,
- spread risk,
- equity risk,
- liquidity risk,
- currency risk,
- credit risk, and
- strategic risk.

- 39(c) information about *insurance risk* (both before and after risk mitigation by reinsurance), including information about: (i) sensitivity to insurance risk (see paragraph 39A).
- 39A To comply with paragraph 39(c)(i), an insurer shall disclose either (a) or (b) as follows:
- (a) a sensitivity analysis that shows how profit or loss and equity would have been affected if changes in the relevant risk variable that were reasonably possible at the end of the reporting period had occurred; the methods and assumptions used in preparing the sensitivity analysis; and any changes from the previous period in the methods and assumptions used. However, if an insurer uses an alternative method to manage sensitivity to market conditions, such as an embedded value analysis, it may meet this requirement by disclosing that alternative sensitivity analysis and the disclosures required by paragraph 41 of IFRS 7.
- (b) qualitative information about sensitivity, and information about those terms and conditions of insurance contracts that have a material effect on the amount, timing and uncertainty of the insurer's future cash flows.

Disclosures regarding sensitivity may be either quantitative *or* qualitative. It is expected that disclosures responding to the requirements in 39(c) and 39A will be prepared primarily by chief risk officers, risk managers, and chief financial officers of insurers. However, actuaries may play an important role in providing quantitative analyses for sensitivity testing purposes. Actuaries have developed computer models and modeling expertise (e.g., dynamic capital adequacy testing) that can be used to perform sensitivity testing. The focus on this disclosure is to show the changes on the net income and equity. For P&C insurers, these effects are expected to be the same or similar.

There is a difference in the number of assumptions underlying actuarial valuations for life insurers and P&C insurers. The valuation methods used in life insurance tend to incorporate fewer assumptions and, thus, sensitivity testing of the assumptions can be more readily accomplished. For P&C insurers, there could be a multitude of assumptions if one considers an assumption to be each age-to-age factor or each initial expected loss ratio, which can vary by line of business and by accident year.

As a result, it is expected that insurers would focus on the main line(s) of business for conducting sensitivity analyses of the actuarial policy liabilities valuation.

Focusing on the line(s) of business with the largest value(s) of unpaid claims and LAE, examples of sensitivity tests that an actuary could consider for the insurance risk include

- increasing the tail loss development factors,
- increasing the trend rates underlying the calculation of the initial expected loss ratios for the Bornhuetter-Ferguson method,
- varying the best estimate by a set percentage,
- incorporating the occurrence of a likely adverse event in the evaluation of policy liabilities,
- changing the margin(s) for adverse deviations,
- using alternative confidence level percentiles, and
- increasing or decreasing the discount rate.

39(c) (ii) concentrations of insurance risk, including a description of how management determines concentrations and a description of the shared characteristic that identifies each concentration (e.g., type of insured event, geographical area, or currency).

To respond to requirement 39(c)(ii), the insurer may include a description of its concentration by business segment, line of business, geographic region, or any other characteristic relevant to its operations.

Concentration of exposures (i.e., insured risks) is particularly important in the area of catastrophe perils, such as earthquake and winter storm. The output from catastrophe models would serve as a primary source of quantitative information to comply with this disclosure requirement. Most P&C insurers use catastrophe models to comply with earthquake regulatory filing requirements. In addition, some insurers use internal systems for aggregating exposures.

The insurer would present not only quantitative summaries of its concentration, but would also describe the process followed to measure the concentration risk. Considerations in determining the concentration risk include, but are not limited to,

- diversification,
- underwriting limits, and
- reinsurance.

39(c) (iii) actual claims compared with previous estimates (i.e., claims development). The disclosure about claims development shall go back to the period when the earliest material claim arose for which there is still uncertainty about the amount and timing of the claims payments, but need not go back more than ten years. An insurer need not disclose this information for claims for which uncertainty about the amount and timing of claims payments is typically resolved within one year.

Disclosure responding to requirement 39(c)(iii) may include tables similar to the five- to 10-year development summaries currently required by Canadian regulators. Such summaries are currently included in the policy liabilities valuation reports from most P&C insurers.

Summaries of historical claims development are most valuable if they include all the years in which there is still uncertainty. If the claims development becomes fairly stable after fewer than 10 years, then the disclosure of a shorter experience period may be sufficient. In contrast, if the claims are developed for more than 10 years, then the disclosure of a longer experience period is suggested, but it is not required by IFRS 4.

Since the development could be used to reconcile to the claims provision posted in the financial statement, it would be useful to show balancing items on separate lines. Balancing items could include, but are not limited to,

- unpaid claims for years prior to the experience period,
- provision for internal loss adjustment expense (ILAE),
- provision relating to the Facility Association (FA) and other pools (such as an aviation pool),
- any special provision related to the claims and LAE, and
- change in the amount of discount from one year to the next.

If the development is presented on a net of reinsurance basis, the provision recoverable from reinsurers would be added back as a balancing item for reconciliation purposes.

39(d) information about credit risk, liquidity risk and market risk that paragraphs 31–42 of IFRS 7 would require if the insurance contracts were within the scope of IFRS 7. However:

(i) an insurer need not provide the maturity analysis required by paragraph 39(a) and (b) of IFRS 7 if it discloses information about the estimated timing of the net cash outflows resulting from recognised insurance liabilities instead. This may take the form of an analysis, by estimated timing, of the amounts recognised in the statement of financial position.

(ii) if an insurer uses an alternative method to manage sensitivity to market conditions, such as an embedded value analysis, it may use that sensitivity analysis to meet the requirement in paragraph 40(a) of IFRS 7. Such an insurer shall also provide the disclosures required by paragraph 41 of IFRS 7.

To respond to requirement 39(d), the insurer would disclose information about credit risk, liquidity risk, and market risk as they relate to insurance contract liabilities. Paragraphs 31–42 of IFRS 7 refer to information about the same risks related to assets; disclosures related to assets are outside the scope of this research paper.

Regarding policy liabilities, the disclosures required to respond to requirement 39(d) may include commentary on

credit risk as related to the uncollectibility of reinsurance,

liquidity risk as related to the availability of assets required to meet the timing of cash outflows,

market risk as related to the selected discount rate, and

currency risk to the extent claims are paid and reserved in multiple currencies.

39(e) information about exposures to market risk arising from embedded derivatives contained in a host insurance contract if the insurer is not required to, and does not, measure the embedded derivatives at fair value.

Generally, disclosure relating to requirement 39(e) would not be applicable to P&C insurers.

**Appendix: Illustrative Example of Disclosure Notes**

(Totals in each table might not add up due to rounding)

**1. Summary of Significant Accounting Policies****Insurance Contracts****(a) Classification**

Insurance contracts are those contracts that transfer significant insurance risk at the inception of the contract. Contracts not meeting the definition of insurance contracts would have been classified as investment contracts, derivative contracts or service contracts. The company has reviewed all the contracts issued to its policyholders and concluded that they all meet the definition of insurance contracts. Paragraph 36

**(b) Recognition and Measurement**

The company issues casualty and property insurance contracts. The company mostly writes automobile insurance and property insurance. Automobile insurance contracts protect the company's policyholders against the risk of causing harm to third parties as a result of their use of the automobile and also protect the policyholders against injury. It may also protect against damages caused to the policyholders' cars or the third parties' cars.

Property insurance contracts mainly compensate the company's policyholders for damages suffered to their properties or for the value of property lost. Policyholders who undertake commercial activities on their premises could also receive compensation for the loss of earnings caused by the inability to use the insured properties in their business activities (business interruption cover).

For these contracts, premiums are recognized as revenue (earned premiums) proportionally over the period of coverage. The portion of premium received on in-force contracts that relates to unexpired risks at the balance sheet date is reported as the unearned premium liability. Premiums are shown before deduction of commission and are gross of any taxes and dues levied on premiums. Paragraph 37(a)

Claims and loss adjustment expenses are charged to income as incurred based on the estimated liability for compensation owed to policyholders or third parties for damages caused by the policyholders. Paragraph 37(a)

They include direct and indirect claims settlement costs and arise from events that have occurred up to the end of the reporting period even if they have not been reported to the company. The company discounts its liabilities for unpaid claims and includes a provision for adverse deviations. Liabilities for unpaid claims are estimated using the input of assessment for individual cases reported to the company and statistical analyses for the claims incurred but not reported.

**(c) Deferred policy acquisition costs (DAC)**

Commissions and other acquisition costs that vary with and are related to securing new insurance contracts and renewing existing insurance contracts are capitalized as an asset (DAC). All other costs are recognized as expenses when incurred. The DAC is subsequently amortized over the terms of the policies as premium is earned. Paragraph 37(a)

**(d) Liability adequacy test**

At each end of the reporting period, liability adequacy tests are performed to ensure the adequacy of the contract liabilities net of related DAC assets. In performing these tests, current best estimates of future contractual cash flows and claims handling and administration expenses, as well as investment income from the assets backing such liabilities, are used. Any deficiency is immediately charged to profit or loss initially by writing off DAC and by subsequently establishing a provision for losses arising from liability adequacy tests (the premium deficiency).

Paragraph 37(a)

**(e) Reinsurance contracts held**

Contracts entered into by the company with reinsurers under which the company is compensated for losses on one or more contracts issued by the company and that meet the classification requirements for insurance contracts are classified as reinsurance contracts held. Contracts that do not meet these classification requirements are classified as financial assets. Insurance contracts entered into by the company under which the policyholder is another insurer (assumed reinsurance) are included with insurance contracts.

Paragraph 36

The benefits to which the company is entitled under its reinsurance contracts held are recognized as reinsurance assets. These assets consists of short-term balances due from reinsurers, as well as longer term receivables that are dependent on the expected claims and benefits arising under the related reinsured insurance contracts. Amounts recoverable from or due to reinsurers are measured consistently with the amounts associated with the reinsured insurance contracts and in accordance with the terms of each reinsurance contract. Reinsurance liabilities are primarily premium payable for reinsurance contracts and are recognized as an expense when due.

Paragraph 37(a)

The company assesses its reinsurance assets for impairment on a yearly basis. If there is objective evidence that the reinsurance asset is impaired, the company reduces the carrying amount of the reinsurance asset to its recoverable amount and recognizes that impairment loss in the income statement. The company gathers the objective evidence that a reinsurance asset is impaired using the same process adopted for financial assets held at amortized cost.

Paragraph 37(a)

**2. Critical Accounting Estimates and Judgements**

Paragraph 37(a)

The company makes estimates and assumptions that affect the reported amounts of assets and liabilities within the next financial year. Estimates and judgements are continually evaluated and based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The actuary is appointed by the board of directors of the company. With respect to preparation of these financial statements, the Appointed Actuary is required to carry out a valuation of the policy liabilities and to provide an opinion to the company's shareholder regarding their appropriateness at the balance sheet date. The factors and techniques used in the valuation are in accordance with accepted actuarial practice, applicable legislation and associated regulations.

Paragraph 37(a)

The policy liabilities include a provision for unpaid claims and adjustment expenses on the expired portion of policies and of future obligations on the unexpired portion of policies. In performing the valuation of the liabilities for these contingent future events, the Appointed Actuary makes assumptions as to future loss ratios, trends, reinsurance recoveries, investment

rates of return, expenses and other contingencies, taking into consideration the circumstances of the company and the nature of the insurance policies.

### 3. Management of Insurance and Financial Risk

Paragraph 38

The company issues contracts that transfer insurance risk. This section summarizes these risks and the way the company manages them.

#### 3.1 Insurance risk

##### (a) Underwriting risk

Underwriting risk is the exposure to financial loss resulting from the selection and approval of risks to be insured as well as the reduction, retention and transfer of risks. Paragraph 39(a)

Insurance policies are written in accordance with the management practices and regulations within each provincial jurisdiction taking into account the company's risk tolerance and underwriting standards. No individual long-term or non-standard policy is written by the company.

##### (b) Concentration risk

The company's exposure to concentration of insurance risk is mitigated by a portfolio diversified across different geographic area and classes of business. The concentration by geographic area and classes of business at the end of the year is broadly consistent with the prior year. Paragraph 39(a)  
Paragraph 39(c)(ii)

The company has exposure to catastrophe losses that may impact more than one operating unit. It is protected by catastrophe reinsurance contracts, limiting the losses from any one catastrophic event.

The company has more than 40% of its business in Ontario automobile and is exposed to trends, social inflation, judicial changes and regulatory changes affecting this business segment.

The tables below demonstrate the diversity of the company's operations.

#### Year-ended December 31, 2011

Gross Written Premium	Ontario	Alberta	Nova Scotia	Manitoba	British Columbia	Total
Personal Property	4,184	450	583	1,700	100	7,017
Commercial Property	1,433	870	225	758	1,045	4,330
Automobile	9,962	968	1,136	8	2	12,075
<b>Total</b>	<b>15,579</b>	<b>2,288</b>	<b>1,944</b>	<b>2,465</b>	<b>1,147</b>	<b>23,422</b>

**Year-ended December 31, 2010**

Gross Written Premium	Ontario	Alberta	Nova Scotia	Manitoba	British Columbia	Total
Personal Property	3,765	504	560	1,472	100	6,400
Commercial Property	1,421	683	215	720	912	3,952
Automobile	8,969	1,245	1,170	8	1	11,393
<b>Total</b>	<b>14,156</b>	<b>2,432</b>	<b>1,945</b>	<b>2,199</b>	<b>1,014</b>	<b>21,745</b>

**(c) Reinsurance risk**

The company is exposed to contract disputes and coverage gaps in its agreement with its reinsurers and the possibility of default by its reinsurers. The company's strategy in respect of the selection, approval and monitoring of reinsurance agreements is addressed by the following protocols:

Paragraph 39(a)

- placement of appropriate treaty or facultative reinsurance governed by the company's reinsurance management strategy,
- regular review of reinsurance agreements to determine their effectiveness based on current exposures, historical losses and potential future losses, and
- exposures to reinsurance counterparties and active monitoring of the credit quality of those counterparties.

**(d) Regulatory risk**

Regulation covers a number of areas including solvency, change in control and capital movement limitations. The company works closely with regulators and monitors regulatory developments to assess their potential impact on its ability to meet solvency and other requirements.

Paragraph 39(a)

**3.2 Financial risk****(a) Interest rate risk**

The company's fixed income securities portfolio is exposed to interest rate risk. Fluctuations in interest rates have a direct impact on the market valuation of these securities and liability values. As interest rates rise, market values of fixed income securities portfolios fall, and consequently the liabilities would also decrease.

Paragraph 39(a)

As at December 31, 2011, management estimates that an immediate hypothetical 100 basis points parallel increase in interest rates would decrease the market value of the fixed income securities by \$1,124 (2010 – \$979) and decrease the value of unpaid claims reserves by \$248 (2010 – \$228), generating a net income impact of \$175 (2010 – \$160). Conversely, a 100 basis point decrease in interest rates would increase the market value of the fixed income securities by \$1,207 (2010 – \$1,051) and increase the value of unpaid claims reserves by \$260 (2010 – \$239), generating a net income effect of \$178 (2010 – \$165).

Paragraph 39(c)(i)



**(b) Credit risk**

The company has exposure to credit risk, which is the risk that a counterparty will be unable to pay amounts in full when due. Key areas where the company is exposed to credit risks are

Paragraph 39(a)  
Paragraph 39(d)

investments in the form of term deposits, government and corporate bonds, and preferred shares,  
reinsurers' share of insurance liabilities,  
amounts due from reinsurers in respect of claims already paid,  
amounts due from insurance policyholders, and  
amounts due from insurance intermediaries.

The following policies and procedures are in place to manage this risk.

An investment policy is in place and its application is monitored by the Investment Committee. Diversification techniques are employed to minimize risk. No more than 3 percent of the portfolio may be invested in any one corporate issuer or related group. There are also minimum limits on the quality of investments purchased and retained.

Credit ratings are determined by recognized external credit rating agencies.

Investment guidelines specify minimum and maximum limits for each asset class.

Reinsurance is placed with counterparties that have a good credit rating and concentration of credit risk is managed by policy guidelines set each year by the Reinsurance Committee.

Premiums due from insurance policyholders are payable monthly, and policies are cancelled after two missed payments.

The breakdown of the company's fixed income securities is presented in the following table.

	<b>2011</b>	<b>2010</b>
AAA	11,086	13,479
AA	14,915	9,706
A	8,833	9,981
BBB	5,439	4,095
<b>Total Fixed Income Securities</b>	<b>40,274</b>	<b>37,261</b>

**(c) Liquidity risk**

The purpose of liquidity management is to ensure that there is sufficient cash to meet all financial commitments and obligations as they fall due.

Paragraph 39(a)  
Paragraph 39(d)

In addition to the liquid assets held in short-term money market securities, the company maintains cash held for working capital requirements.

The company limits the risk of liquidity shortfall, resulting from a mismatch in the timing of claim payments and receipt of claims recoveries by negotiating cash clauses in certain reinsurance contracts and seeking accelerated settlements for large claims.

The following tables indicate the estimated amount and timing of cash flows arising from the insurance contract liabilities and the bond portfolio.

**As at December 31, 2011**

	Undiscounted				
	Amount	0–3 Year	3–5 Year	5–7 Year	> 7 Year
Insurance contracts					
Net outstanding & IBNR	13,210	7,946	3,307	1,369	588
Net premium liability <sup>2</sup>	4,090	2,250	940	615	285
<b>Total insurance contracts</b>	<b>17,300</b>	<b>10,196</b>	<b>4,247</b>	<b>1,984</b>	<b>873</b>
	Total	0–3 Year	3–5 Year	5–7 Year	> 7 Year
<b>Bond portfolio</b>	<b>40,274</b>	<b>20,394</b>	<b>10,302</b>	<b>6,350</b>	<b>3,227</b>

**4. Insurance Liabilities and Reinsurance Assets**

The following is a summary of the contract provisions and related reinsurance assets as at December 31, 2011 and December 31, 2010.

**Policy Liabilities and Reinsurance Assets**

Paragraph 37(b)

	2011 (\$000)	2010 (\$000)
<b>Gross</b>		
Outstanding claims provision	18,088	15,986
Provision for claims incurred but not reported	13,829	13,250
Provision for salvage and subrogation	(860)	(770)
Effect of discounting	(2,310)	(2,913)
Provision for adverse deviations	2,360	2,306
Provision for unearned premium	12,844	11,703
Premium deficiency	0	0
Other	0	0
<b>Total – Policy liabilities – gross</b>	<b>43,950</b>	<b>39,561</b>

<sup>2</sup> The net premium liability is the estimated policy liabilities in connection with the unearned premium determined by the Appointed Actuary.

**Ceded**

Outstanding claims provision	11,338	9,526
Provision for claims incurred but not reported	6,961	6,652
Provision for salvage and subrogation	(452)	(387)
Effect of discounting	(1,287)	(1,594)
Provision for adverse deviations	1,188	1,204
Provision for unearned premium	7,390	6,671
Premium deficiency	0	0
Other	0	0
<b>Total – Reinsurers’ share of policy liabilities</b>	<b>25,139</b>	<b>22,072</b>

**Net**

Outstanding claims provision	6,750	6,460
Provision for claims incurred but not reported	6,868	6,597
Provision for salvage and subrogation	(408)	(382)
Effect of discounting	(1,023)	(1,319)
Provision for adverse deviations	1,172	1,102
Provision for unearned premium	5,453	5,032
Premium deficiency	0	0
Other	0	0
<b>Total – Policy liabilities – net</b>	<b>18,812</b>	<b>17,490</b>

The following is a summary of the claims liabilities by business segment as at December 31, 2011 and December 31, 2010.

**Claims Liabilities**

	<b>2011</b>		
	<b>Gross</b>	<b>Reinsurance Ceded</b>	<b>Net</b>
	<b>(\$000)</b>	<b>(\$000)</b>	<b>(\$000)</b>
Automobile – Ontario	15,528	8,660	6,869
Automobile – Other	3,106	1,983	1,123
Property	10,870	6,022	4,848
Other	1,553	1,183	370
Total undiscounted	31,057	17,848	13,209
Discounting with PfAD	50	(99)	149
<b>Total discounted claims liabilities</b>	<b>31,107</b>	<b>17,748</b>	<b>13,359</b>

  

	<b>2010</b>		
	<b>Gross</b>	<b>Reinsurance Ceded</b>	<b>Net</b>
	<b>(\$000)</b>	<b>(\$000)</b>	<b>(\$000)</b>
Automobile – Ontario	15,372	8,781	6,591
Automobile – Other	2,562	1,561	1,001
Property	9,678	5,179	4,500
Other	854	271	583
Total undiscounted	28,466	15,791	12,675
Discounting with PfAD	(607)	(390)	(217)
<b>Total discounted claims liabilities</b>	<b>27,858</b>	<b>15,401</b>	<b>12,458</b>

**4.1 Assumptions, Changes in Assumptions and Sensitivity****(a) Methodology and assumptions**

The best estimates of claims liabilities have been determined from the projected ultimate claims liabilities based on the incurred loss development, the paid loss development, the Bornhuetter-Ferguson method, or the expected loss ratio methods.

Paragraph 37(c)

*Incurred Loss Development Method/Paid Loss Development Method*

The distinguishing characteristics of the development method are that ultimate claims for each accident year are produced from recorded values assuming the future claim development is similar to the prior years' development. The underlying assumption is that claims recorded to date will continue to develop in a similar manner in the future.

*Bornhuetter-Ferguson Method*

The key assumption of the Bornhuetter-Ferguson method is that unreported claims will develop based on expected claims. In other words, the claims reported to date contain no informational value as to the amount of claims yet to be reported. It is most frequently used for lines of business with long settlement patterns, and lines of business subject to the occurrence of large losses.

*Expected Loss Ratio Method*

The key assumption for the expected loss ratio method is that the actuary can estimate total unpaid claims based on an a priori estimate better than from claims experience observed to date. This method is more commonly used in lines of business with longer emergence patterns and settlement patterns.

Claims paid and incurred, both gross and net of reinsurance recoveries, were produced for the last 20 years in a triangular form, by accident year and development period. Ratios of claim amounts at successive development years were then calculated to build loss development factor triangles.

The selected loss development factors have been based on the historical development pattern from the reported loss development triangles. Judgement was used whenever there was a wide variability in the past development factors due to a small claims sample or due to a fairly new class of business. Also, development factors which seemed abnormal have been disregarded in selecting the loss development factors.

The claims data includes external claims adjustment expenses, but does not include internal claims adjustment expenses. A provision for internal claims adjustment expenses (ILAE) has been determined based on the ratio of paid ILAE to paid losses. This method assumes that half of the ILAE is required when the claim is first set up. The remaining half of the ILAE is required to maintain the claim. This ILAE percentage is applied to the pure IBNR and to half of the case reserves plus IBNR for known claims.

Non-reinsurance recoveries, including salvage and subrogation, were specifically analyzed in this valuation.

Once the undiscounted claims liabilities are determined, the liabilities are adjusted to the actuarial present value. To adjust to the actuarial present value, the undiscounted claims liabilities are first discounted based on a selected discount rate. The selected discount rate is based on the market yield from the investment portfolio. Provision for adverse deviations is then added to the discounted liabilities to become the actuarial present value. A provision for adverse deviations is selected in accordance with the Standards of Practice of the Canadian Institute of Actuaries.

The estimates for unearned premium liabilities have been tested to ensure that they are sufficient to pay for future claims and expenses in servicing the unexpired policies as of the valuation date.

**(b) Changes in assumptions**

For Ontario accident benefits, the loss experience has been deteriorating over the last few years. In this year's analysis, the loss development factors have been selected based on more recent data and thus have been increased by about 10 percent on each development period. This generates an increase in IBNR of about \$150,000.

Paragraph 37(d)

As at December 31, 2010 an amount of \$160,000 was added explicitly to IBNR to account for a pending class action activity. In 2011, the pending class action was cleared and this provision is no longer necessary. Therefore, the claim provision was reduced by \$160,000.

The discount rate, which is selected based on the expected yields of the assets supporting the policy liabilities decreased by 132 basis points between year-end 2010 and year-end 2011, thereby increasing the claim provision by \$296,000.

The selection of the claim development margin for adverse deviations has been increased for Ontario accident benefits. This is due to a change in the philosophy surrounding claims handling practices. The selection has been increased from 11.0 percent to 12.5 percent, generating an increase in the discounted provision of \$25,000.

*[Please note that this is only an example. In practice, if there are not as many changes, fewer disclosures would be needed.]*

**(c) Sensitivity Analysis**

There is uncertainty inherent in the estimation process. The actual amount of ultimate claims can only be ascertained once all claims are closed.

Paragraph 39(c)(i)

Among all the lines of business, the automobile liability line of business has the largest unpaid claims liabilities. Given the nature of this line of business and the fact that it has a very long tail, this line's estimate is the most critical to the assumptions used. If the tail factor selection on this line of business was 5 percent higher, the net claims liabilities would be \$400,000 higher. The net income effect would be a reduction of \$267,000. If the expected loss ratios used were 5 percent higher in all accident years, the net claims liabilities would be \$185,000 higher, generating a net income reduction of \$128,730. Changes in assumptions on other lines of business are considered to be less material.

**4.2 Movements in Insurance Liabilities and Reinsurance Assets**

The following changes have occurred in the provision for unearned premiums during the year.

Paragraph 37(e)  
Paragraph 37(b)

	<b>2011</b>	<b>2010</b>
	(\$000)	(\$000)
<b>Provision for net unearned premium at January 1</b>	5,032	4,258
Net premium written	10,043	9,794
Less: Net premium earned	(9,622)	(9,020)
Change in provision for net unearned premium	421	774
Adjustments (exchange rate, others)	0	0
<b>Provision for net unearned premium at December 31</b>	<b>5,453</b>	<b>5,032</b>

The net premium earned of \$9,622 (2010 – \$9,020) represents the income arising from insurance contracts.

Paragraph 37(b)

The table below summarizes the change in loss and LAE provision between January 1, 2011 and December 31, 2011 (January 1, 2010 to December 31, 2010).

	<b>2011</b>			<b>2010</b>		
	Gross	Ceded	Net	Gross	Ceded	Net
Provision at January 1	27,859	15,401	12,458	28,559	16,298	12,262
Effect of discounting <sup>3</sup> at prior year-end	(607)	(390)	(217)	(814)	(536)	(278)
Undiscounted provision at prior year-end	28,466	15,791	12,675	29,373	16,834	12,539
Ultimate claims for current accident year	20,261	10,400	9,861	14,413	6,800	7,613
less payments on current accident year	(7,045)	(3,836)	(3,209)	(5,318)	(2,559)	(2,759)
less payments on prior accident years	(7,800)	(3,939)	(3,861)	(7,108)	(3,681)	(3,427)
Undiscounted provision before change in prior ultimates	33,882	18,417	15,465	31,360	17,394	13,966
Change in estimated ultimate losses from prior years	(2,886)	(598)	(2,288)	(3,052)	(1,682)	(1,370)
Unusual change (e.g., HST provision)	61	29	32	158	79	79
Foreign exchange rate movement	0	0	0	0	0	0
Undiscounted provision at current year-end	31,057	17,848	13,209	28,466	15,791	12,675
Effect of discounting	50	(99)	149	(607)	(390)	(217)
Provision as per financial statement at December 31	31,107	17,748	13,359	27,859	15,401	12,458
Incurred claims	18,093	10,122	7,971	11,726	5,343	6,383

The net incurred claims of \$7,971 (2010 – \$6,383) represent the claims expenses arising from insurance contracts.

Paragraph 37(b)

Paragraph 39(c)(iii)

<sup>3</sup> Effect of discounting includes provision for adverse deviations.

### 4.3 Development Claims Tables

The following table represents the development on the claims on the net basis.

Accident year	Total all insurance risks								Total
	2004	2005	2006	2007	2008	2009	2010	2011	
Estimate of ultimate claims costs:									
– at end of accident year	6,145	6,538	6,716	7,462	7,017	7,294	7,613	9,861	
– one year later	6,094	6,349	6,670	7,409	6,894	6,894	6,898		
– two years later	6,045	6,094	6,409	7,374	6,716	6,573			
– three years later	5,958	6,000	6,305	6,894	6,312				
– four years later	5,950	5,919	6,170	6,788					
– five years later	5,831	5,879	5,550						
– six years later	5,694	5,800							
– seven years later	5,649								
Current estimate of cumulative claims	5,649	5,800	5,550	6,788	6,312	6,573	6,898	9,861	55,432
Cumulative payments to date	(5,595)	(5,685)	(5,294)	(6,347)	(5,150)	(4,942)	(4,733)	(3,209)	(40,954)
Liability recognised	54	115	257	441	1,162	1,631	2,166	6,652	12,478
<b>Total all accident years</b>									
Liability recognised									12,478
Liability with respect to prior accident years									70
Balancing items									662
Effect of discounting <sup>4</sup>									149
Total net liabilities									13,359
Liabilities recovered from reinsurers									17,748
Total gross liabilities included in the balance sheet for all insurance claims									31,107

<sup>4</sup> Effect of discounting includes provision for adverse deviations.