Nova Scotia Regulatory and Appeals Board

Rate Filing Requirements for Automobile Insurance

Section 155G - Prior Approval (including Mandatory Filing)

Published: February 21, 2018 / Effective: June 1, 2018

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Executive Summary

Section 155 of the *Insurance Act* requires the Company to make application and obtain prior approval for the establishment of a new risk-classification system or for revisions to an existing risk-classification systems or rates for all classes of insurance. The Nova Scotia Regulatory and Appeals Board (Board) has limited the application of this requirement to individually rated vehicles only. The Board does not regulate rates for “fleet-rated” business or garage policies.

The *Mandatory Filing of Automobile Insurance Rates Regulations* made under Sections 16AA and 159 of the *Insurance Act* R.S.N.S. 1989, c. 231 O.I.C. 2008-473 (September 9, 2008, effective October 1, 2008), N.S. Reg. 387/2008, requires the Company to file, in accordance with the Board schedule, for approval of rates and risk-classification systems, as follows:

- Private Passenger Vehicles – at least once every 24 months; and
- Commercial Vehicles – at least once every 36 months; and
- Other vehicles (e.g., miscellaneous vehicles) – at least once every 36 months.

The Board created these filing requirements (*Section 155G- Prior Approval*) to collect the information required for the Board to review the rates and risk-classification systems to determine, as per Section 155I, that they are:

- just and reasonable in the circumstances;
- reasonable predictive of risk and distinguishes fairly between risks;
- do not impair the solvency of the Company, or are excessive in relation to the financial circumstances of the Company; and
- do not violate the *Insurance Act* or its *Regulations*.

The Board expects that filings made to meet the mandatory filing deadlines generally will be made under these filing requirements. Mandatory filings are required even if the proposal is for no change in rates.

Any type of change to the risk-classification system or rates can be filed for approval under these filing requirements. The Board developed several simplified filing requirements to address specific changes (e.g., Section 155G – Discounts & Surcharges, Section 155G – Endorsements) but even changes that can be addressed under simplified filing requirements may be made under these filing requirements.

While the Company is required to file to meet the mandatory filing deadlines, the Board believes that ***the Company should regularly review its indicated rate levels and current rate levels for all categories of automobile insurance and file if changes are necessary rather than waiting for the mandatory filing deadline.***

Filing Format

This application to the Board will be fully electronic or paperless. Subject to any technical notes published by the Board, the filing should consist of the following files, ***each with no password protection***, containing the information sections as outlined below, in the categories and order outlined below to constitute a complete filing.

Part 1: Non-Confidential Information (Format: One PDF File)

Section	Description
N-1	Table of Contents
N-2	NC Pages from "S155G PA - Summary of Information – Appendix A.xls"
N-3	Certificates of Officer and Actuary – Appendix B
N-4	Underwriting/Rating Rule Changes
N-5	Rating Profiles – Appendix C
N-6	Financial Data – Appendix D

Part 2: Confidential Information (Format: One PDF File)

Section	Description
C-1	Table of Contents
C-2	Conf. Pages from "S155G PA - Summary of Information – Appendix A.xls"
C-3	Actuarial Support/Justification
C-4	Discount & Surcharge Changes
C-5	Final Rates
C-6	Dependent Classes Information (if applicable)
C-7	Comparison to Industry/Rating Bureau (if applicable)

Part 3: Summary Information (Format: Excel Spreadsheets)

File	Description
Summary of Information – Appendix A	Summary Information Spreadsheet
Rating Profiles – Appendix C	Completed Rating Profiles

The four required electronic files must be forwarded to the Board generic mailbox at board@novascotia.ca.

For larger files, please contact the Board general office phone number (902-424-1333) to ensure the mailbox can handle the file size. In lieu of email, the "Send Files to the Board" option on Board website (https://nserbt.ca/nsrab) can be used.

The confidential sections noted above reflect the Board's position on the portions of an application which will routinely be kept confidential.

Part 1 – Non-Confidential Information

Section N-1 - Table of Contents

The table of contents, for the non-confidential information portion of the application, must show the main headings noted above plus the key headings within each of the sections. It must be detailed enough to allow the reader to quickly isolate key information.

Section N-2 - NC Pages from "S155G PA - Summary of Information – Appendix A.xls"

This section contains a copy of the non-confidential pages completed in the spreadsheet "**S155G PA - Summary of Information – Appendix A.xls**". The first two tabs of this spreadsheet include the non-confidential information.

Specific instructions to complete the non-confidential tabs of the spreadsheet are outlined below:

- In responding to **Question NC-1**: check **all** the items that are applicable to the application. While (a) & (b) are mutually exclusive, other changes (c) - (k) may apply.
- In responding to **Question NC-2a.**: proposed effective dates are to be listed for both new and renewal business. If there are any changes to the proposed effective dates, the Company must notify the Board.
- In responding to **Question NC-2b.**: enter the date by which, if a decision has not been made, the effective dates would not be achievable. The Board will not commit to meeting this date. It is included to provide a sense of how likely the effective dates are to change due to any review delays.

Section N-3 - Certifications

N-3.a. Certificate of the Officer

A scan of an original signed certificate of an authorized officer of the Company must be included in each filing. The form for the Certificate of Officer is found in Appendix B. Authorized officers are the President, CEO, COO, CFO, any Vice-President, the Treasurer, or the Corporate Secretary or Chief Agent for Canada, for the Company. The signature should be in blue ink so that it can be verified as an original signature.

The Certificate of Officer must identify a person authorized by the Company to act as the contact person for the Company. All filing correspondence will occur between this person and Board staff.

N-3.b. Certificate of the Actuary

Filings that result in a rate level change, or filings for a category of automobile insurance previously not written by a Company, must include a scan of an original certificate of a Fellow of the Canadian Institute of Actuaries. The required form is found in Appendix B. The signature should be in blue ink so that it can be verified as an original signature.

Section N-4 – Underwriting/Rating Rule Changes

Rating rules are those rules or definitions by which a risk is assigned to a specific rating cell or by which a discount or surcharge is applied. Examples include rules by which territory, vehicle use or class are assigned. Rating rules are part of a Company's risk classification system and must be filed according to these requirements. Any rate level impact resulting from changes must be quantified and its impact should be reflected in the proposed rate level changes.

Underwriting rules are those rules used to govern the decision to accept or decline a risk or a coverage, deductible level, or liability limit.

Automobile insurance manual pages that describe changes to underwriting rules, rating rules, or definitions must be included with the filing. Only pages with changes must be filed.

The required information must include: (i) a description of the proposed changes, (ii) the rationale for the proposed changes, (iii) the rate level effects of the proposed changes, if any, (iv) an estimate of the number of policies affected, and (v) the calculations that validate the rate level effect of the proposed changes based on the expected distribution of business.

An updated automobile insurance manual must be submitted electronically within 30 days of approval. Note, actual rate group tables and actual rate pages are not required in that filing.

N-4.a. Rating Rule Changes for Classification Variables

Any changes to a rating rule for a particular classification must be disclosed in this section. A current and a proposed distribution of the class that is affected by the rating rule change must be provided to determine the average premium change (shift) and impact on the overall rate level. All assumptions and detailed calculations must be provided to support the rate level change.

N-4.b. Rating Rule Changes for Discounts and Surcharges

Any changes to a rating rule for a particular discount or surcharge must be disclosed in this section. Also, the rating rule applicable to a newly proposed discount or surcharge must be disclosed in this section. A current and a proposed distribution of the business that is affected by the rating rule change must be provided to determine the average premium change (shift) and impact on the overall rate level. All assumptions and the rationale to support the use of the rating rule must be disclosed.

Section N-5 - Rating Profiles (Appendix C)

This section contains a copy of the rating profile pages completed in the appropriate rating profile spreadsheet for the type(s) of vehicles covered in the application. Separate spreadsheets exist for Private Passenger Vehicles, Commercial Vehicles, and Miscellaneous Vehicles. The appropriate spreadsheet(s) should be selected for the application. Once completed, the spreadsheet should be renamed to “Rating Profiles - Appendix C”. If the application involves a combination of the three vehicle classes covered in the profile spreadsheets, add “Part #” to the file name, with # replaced with 1, 2 and/or 3 as needed. The actual Excel spreadsheet(s), as renamed, must also be provided. The remaining portion of this section deals with how to complete the rating profile spreadsheet.

Appendix C sets out rating examples covering the categories of automobile insurance using the Canadian Automobile Insurance Rate Regulators’ harmonized profiles. These profiles are to be used for all filings that require rating profiles. Each Company must file, with the Board, those rating examples that would be affected by the filing.

It should be noted that these rating examples may not be the same examples required in future filings. The Board may require additional and/or different rating examples be submitted in future reviews.

The rating examples must be completed according to the risk description specified. Each Company must provide both current and proposed rating criteria for each of the rating examples as required. Rating territories must be those as defined in the Company's Automobile Insurance Manual.

Any additional information pertaining to the rating example must be disclosed with a detailed description for each affected rating example.

Specific instructions and key assumptions that must be adopted when completing these rating examples are:

- All rates are to be stated on an annual basis. If annual policies are not issued, the rates must be converted to an annual basis.
- All risks must be rated strictly according to the information provided. **DO NOT** provide preferred rates unless the criteria as stated fit the eligibility rules for a preferred class. If so, provide only the preferred rates, and state so.
- Clearly identify all applicable surcharges/discounts that apply to each of the coverages.
- If the Company does not write a particular limit or deductible level for a described profile, provide the premiums using the closest limit/deductible and note the applicable limit/deductible on the profile.
- If the Company provides group discounts, provide the individual non-group rate plus the rates with the highest discount applied.
- For multiple operator risks, provide premiums by coverage by operator using separate sheets. Also, the total policy premium combining all operators must be submitted.
- If, based on the Company’s underwriting rules, a risk profile described in a specified rating example is not written, that fact is to be indicated, and rates need not be provided for that example. However, the Company must explain why the rating example is not appropriate under the circumstances.

- If a rating example does not describe a unique rate, the Company is to provide the highest and lowest rate that could be charged on the described risk, and disclose the assumption underlying the difference.
- Include the premiums for all perils **only if** collision and comprehensive are not offered.

Section N-6 – Financial Data

"Appendix D – Financial Information.XLS" is an Excel sheet that outlines a table that must be completed using the information from the pages listed. The table is replicated below. Note, the sample in the Appendix assumes the most recent year OSFI P&C-1/2 is **2017**. The years in the sample table below should be adjusted as new OSFI P&C-1/2 becomes available.

	2012	2014	2015	2016	2017	Source: OSFI P&C-1/2
ROE						p10.60, r48
Claims Ratio						
Year of Account						p10.60, r30
Year of Accident						p10.60, r31
Company - Automobile Total						
Incurred Claims & Adj Expenses (A)						p67.30, c19 r29*
Earned Premiums (B)						p67.20, c19 r29*
Ratio (A)/(B)						
Nova Scotia - Automobile Total						
Incurred Claims & Adj. Expenses (C)						p67.30, c03 r29*
Earned Premiums (D)						p67.20, c03 r29*
Ratio (C)/(D)						
Expense Ratio						p10.60, l33

**** if pages 67.10-67.30 are on a consolidated basis for the Company, provide the equivalent numbers on a non-consolidated basis and note that this change was made.***

Part 2 – Confidential Information

Section C-1 - Table of Contents

The table of contents, for the confidential information portion of the application, must show the main headings noted above plus the key headings within each of the sections. It must be detailed enough to allow the reader to quickly isolate key information.

Section C-2 - Conf. Pages from "S155G PA - Summary of Information – Appendix A.xls"

This section contains a copy of the Confidential pages completed in the spreadsheet "**S155G PA - Summary of Information – Appendix A.xls**". The first two tabs of this spreadsheet include the non-confidential information. The remaining tabs are confidential.

The spreadsheet, and therefore, this summary section contains certain key information on the nature of the filed rate level or risk classification system changes. The form to be used is attached to this document as Appendix A. All data used in the Actuarial Support section (**Section C-3**) must reconcile to the information presented in this section.

Specific instructions to complete the spreadsheet (i.e., Appendix A) are outlined below:

- In responding to **Question CONF-1**: the indicated rate level change for each coverage, and on an all coverages combined basis, must be disclosed:
    - where changes to base rates are proposed except if such changes to base rates result solely from off-balancing differential or discount changes; or
    - where changes to differentials are proposed if such changes result in an overall rate level change.
- In responding to **Question CONF-1**: the impact of **all** proposed changes to rates or rules, including base rate changes, differential changes, discount or surcharge changes, and rating rule changes, must be disclosed under the proposed rate level change column. The impact by coverage must be calculated, on an uncapped basis (if premium dislocation caps are used/proposed), and disclosed.
- In responding to **Question CONF-1**: the premium weights must be disclosed in percentage terms and must be at the current rate level.
- In responding to **Question CONF-1**: if indications are provided and the loss trends are not those selected by the Board's consulting actuary, currently Oliver Wyman, Inc, (OW), the indicated rate level change for each coverage, and on an all-coverages combined basis using the consulting actuary's loss trend selections (as found on the Board website at https://nserbt.ca/nsrab/mandates/auto-insurance/rate-filing-requirements instead of the Company selected trends must be disclosed as well.
- In responding to **Question CONF-2**: the exposure weights by coverage should be disclosed in percentage terms based on the number of insured vehicles under Bodily Injury and should reflect the in-force or, if not available, most recent accident year distribution level.

- In responding to **Question CONF-3a**, prior rate level changes must be shown. The *All Coverages Combined Rate Level Change* must be based on the on-level premium weights that were applicable at the time of the rate change.
- In responding to **Question CONF-3b**, the *Average Cumulative Rate Change* is to be calculated by:
  - taking the *All Coverages Combined Rate Level Change* from the response to **Question CONF-1**;
  - taking each *All Coverages Combined Rate Level Change* that occurred after January 1 of the year up to the proposed renewal effective date from the responses to **Question CONF-3a,**
  - and then using the following formula:

$$\left[\prod_{\text{all } i,\, d} (1 + i)\,(1 - d) \right] - 1$$

where: *i* = the proposed rate level increase or approved rate level increase(s) that occurred after January 1 of the year in which the proposed rate change is expected to be effective for renewal business; and

d = the proposed rate level decrease or approved rate level decrease(s) that occurred after January 1 of the year in which the proposed rate change is expected to be effective for renewal business.

- In responding to **Question CONF-8** on dislocation, the Company must NOT take into account any premium dislocation or rate capping procedure that is in effect or is proposed.
- In responding to **Question CONF-9** on dislocation, the Company must take into account any premium dislocation or rate capping procedure that is in effect or is proposed. If no such capping exists or will be applied, this section can be skipped.

Section C-3 - Actuarial Support/Justification

The Company must provide detailed support for any rate level change. Actuarial support must contain the data and narrative description of all ratemaking steps for each of the specific rate changes proposed. At a minimum, details must be provided for Third Party Liability, Accident Benefits, Uninsured Automobile, Collision, Comprehensive, All Perils, Specified Perils and SEF 44 (Underinsured Automobile), **even if a rate level change is not proposed for each of these coverages**. Each subsection, outlined below, must contain the necessary documentation for all of the individual coverages (e.g., the section on loss trends must contain loss trend documentation for liability, accident benefits, collision, etc.). In general, documentation must be in sufficient detail to enable the reviewer to trace the resulting rates from the raw data experience and other support data. The Board does not require a Company to use a specific ratemaking methodology. However, a Company is required to provide adequate actuarial documentation and support for the rate levels proposed.

All support provided in this section must reconcile with the information provided in **Section C-2** (i.e., confidential questions in Summary of Information - Appendix A)

To qualify as meeting mandatory filing requirements, the application must include sections C-3.a to C-3.k. Sections C-3.l to C-3.q must be included if these items are changing.

The Board expects that the Company will utilize the same methodologies and consistently derived assumptions in each filing. Where methodologies or the process for developing assumptions are changed from prior filings, the Company must provide the impact of the changes on their indicated rate levels. That is, any changes in either the approach or the underlying data source from that used in the prior rate filing must be disclosed and supported. The impact of any such changes must be disclosed. This requirement does not apply if the Company is adopting an assumption/approach that the Board has required the Company to use in a previous filing. It also does not apply if the Company is adopting the Board Benchmark Trends for loss trends for the first time.

Where the proposed rate/differential changes differ from the indications, the reasons for the deviation must be explained in detail.

The support for an overall rate level change must be comprised of the following subsections, **in the order set out below**. Each section or subsection must be labeled according to the numbering scheme provided and contain all data, data definitions and sources, and any narrative necessary to explain or clarify the various ratemaking steps.

Overall Rate Level Indication:

C-3.a. Overall Description of the Ratemaking Methodology and Summary

C-3.b. Losses

1. Loss Development
2. Loss Trends
3. Treatment of Large Losses
4. Catastrophe (or Excess Claim) Procedure
5. Other Adjustments

C-3.c. Allocated Loss Adjustment Expenses (ALAE)

1. ALAE Development
2. ALAE Trend
3. Catastrophe Procedure
4. Other Adjustments

C-3.d. Unallocated Loss Adjustment Expenses (ULAE)

C-3.e. Premium

1. On-level Adjustments
2. Premium Trend
3. Other Adjustments

C-3.f. Other Expenses

1. Exposure Variable Expenses (Fixed)
2. Premium Variable Expenses (Variable)

C-3.g. Profit Provisions

C-3.h. Credibility

C-3.i. Other Adjustments

C-3.j. Summary Rate Level Indications

Mandatory Territorial Differential Indications:

Even if the Company proposes no change to territories, the following section must accompany an application to meet the mandatory filing requirements outlined in the Mandatory Filing of Automobile Insurance Rates Regulation.

C-3.k. Territorial Indications

1. Indicated Differentials and Proposed Differentials
2. Off-balance
3. Definitions

Other Rate Differential Indications:

The following sections need only be included in a filing if changes to these items are being made.

C-3.l. Implementation of Canadian Loss Experience Automobile Rating (CLEAR) System Differentials (if applicable)

1. Overall Description for Implementing CLEAR
2. Off-balance

C-3.m. Classification/Limit of Liability/Deductible, or Other Rate Differential Indications

1. Indicated Differentials
2. Off-balance

C-3.n. Rating Based on Group Membership

1. Indicated Discounts or Rates
2. Off-balance

C-3.o. Usage Based Insurance (UBI) Discount Programs

1. Description of the UBI Discount Program
2. Reasonableness of the Proposed UBI Discount
3. Application of UBI Discount in Premium Determination
4. UBI Discount Program Costs and the Impact on Company Expenses
5. Interim Reporting

C-3.p. Introduction of New Rating Variable(s)

1. Indicated Discounts or Rates
2. Off-balance

C-3.q. Endorsements

1. Revisions to Current Endorsements
2. Introduction of New Endorsements

C-3.a. Overall Description of the Ratemaking Methodology and Summary

A Company may use either a pure premium or a loss ratio ratemaking approach. This section must indicate the type of approach used and generally outline the process in a summary narrative. A general description of the data must also be included. Specific and detailed information on the data must be included in the appropriate subsections using that data. For example, liability loss data must state whether it is for all limits combined or if it is for a specific (basic) limit.

Any changes to the ratemaking methodology from that used in the previous filing should be explained.

The filing must include the most recent complete year of data that is available at the time the application was prepared. Should the filing include industry experience, the Board expects the filing will include the most recent industry data available at the time the application was being prepared.

C-3.b. Losses

If losses are considered together with ALAE, that fact must be noted in this section and all references to "loss" in this subsection should be considered as referring to "losses and allocated loss adjustment expenses." In this event, **subsection C-3.c.** can be omitted.

The type of loss data must be described in this subsection (i.e., accident year or policy year). Where another basis is used, justification must be provided. The experience period and the respective valuation dates must also be noted. The source of the data must be clearly noted (e.g., Company internal data, Company data as reported by IBC).

Direct losses (i.e., prior to any reinsurance transactions) must be the basis for ratemaking. Direct losses must **not** include losses incurred on the Facility Association Residual Market risk business. Similarly, where industry-wide statistics are used, Facility Association Residual Market results must be excluded.

The impact of insurance reforms (e.g., Minor injury cap reform, Accident Benefit limit reform, etc.) and the development of loss trends are viewed as being tied together. The Company must identify and quantify the impact of such reforms as part of its trend analysis, if applicable.

Data at the major sub-coverage level are generally required for estimating ultimate costs. Aggregation will be required to estimate the required change in rates.

Loss experience should be subdivided at the major sub-coverage level as follows with consideration given to homogeneity and credibility of the data. The following are the major sub-coverage in the Loss Development Exhibits of the General Insurance Statistical Agency (GISA) Automobile Statistical Plan (ASP). Finer break-down of claims experience may be determined to be more appropriate.

- Bodily Injury
- Property Damage*
- Accident Benefits

**includes Property Damage-Tort and Direct Compensation Property Damage (DCPD), until DCPD information is available from GISA. Then the components should be separated.*

- Underinsured Motorist (SEF 44)
- Uninsured Automobile
- Collision
- Comprehensive
- All Perils
- Specified Perils

For each coverage and sub-coverage listed above, payment patterns must be developed for purposes of discounting claims. The Company must show the interest rate selected by coverage for discounting purposes and the rationale for the selection.

C-3.b.1. Loss Development

The data must be developed to an ultimate level through the use of an appropriate loss development procedure. Standard actuarial loss projection methodologies must be used to derive ultimate accident year losses.

The specific loss development approach used in the filing must be outlined and the details of the calculations must be disclosed in this subsection. All judgments associated with the process of loss development (e.g., the selection of loss development factors) must be disclosed in detail and supported. ***The Company must provide an analysis reflecting the impact of any changes in loss development approach from previous filings as outlined in the introduction of section C-3***.

Loss development for a Company's losses must be based on the Company's own data to the extent possible. At a minimum, the history of unadjusted Company loss development data valued at 12-month intervals must be provided (so called "triangles" of loss valuations at various stages of development). Should the Company find it necessary to include outside data or a different source of internal data (such as affiliated Company data), the filing must identify the source of the data and provide an explanation of its applicability. In those cases where the Company relies upon industry experience to estimate its ultimate losses, the Company must explain why using industry experience is more appropriate than basing ultimate loss estimates on its own data.

All data used in the process of loss development must be exhibited and labeled (e.g., are the losses paid or case incurred; what are the dates of valuation).

Where data from other jurisdictions are used, the Company will demonstrate, to the extent possible, that the inclusion of the new data does not materially distort the loss development selections. For example, if Alberta data were used to select the loss development factor, the Company would be expected to show that the development selections that would be produced using the Alberta data alone are not significantly different from that using Nova Scotia data. Where such differences do exist, the Company should explain, in detail, why the use of the different data is appropriate in the circumstances.

Loss development factors should be based on the most recently available calendar year-ending data. More recent data may be used as long as appropriate support is provided.

If loss development for a partial accident year is used, then comparable experience at the same level of maturity must be provided to support the selected loss development factors.

If credibility procedures are used in loss development, the selection of the credibility criterion must be disclosed, the application of the credibility standard must be presented, and the complement of credibility must be disclosed and supported.

C-3.b.2. Loss Trends

The Board publishes loss trend selection reports from its consulting actuary, based upon industry wide Nova Scotia data, to its website on a semi-annual basis. Without evidence to the contrary, the Board views these loss trend selections (Benchmark Trends) as the appropriate ones for use in generating indicated rate level need. If the Company uses these selections, it needs simply state the report used (i.e., upon what data the report was based (e.g., December 2016)) and provide a table of these values in this section. The Company is expected to use the most recent published report available when the application is being developed.

Where the Company chooses to use different selections, the Company will be expected to provide the information outlined below as well as comments on why such selections are more appropriate in the circumstances of the application than the Benchmark Trends. A comparison table of the trends should be included. Indications using the Benchmark Trends should also be produced and reported.

The specific loss trend approach used must be outlined and the details of the calculations must be disclosed in this subsection. All judgments associated with the process of loss trend must be disclosed in detail and supported. The Company must provide an analysis reflecting the impact of any changes in loss trend approach from previous filings as outlined in the introduction of **section C-3**.

The Board expects that only in very rare circumstances would a company have sufficient experience to develop their own loss trends; therefore, the Board encourages companies to make use of the industry Nova Scotia claim frequency and claim severity data with claims and loss experience developed to their ultimate value. Should the Company find it necessary to rely on other data or a different source of internal data, the filing must identify the source of the data and provide an explanation of its applicability in the circumstance.

All data used in the process of estimating annual loss trends must be exhibited, at least in summary form, and labeled (e.g., are losses paid or incurred, developed or undeveloped). Where a Company proposes the use of trends based upon its own data, the selected trends must be compared to those that would be selected using industry data. Where significant differences emerge, the Company must explain why the trends are different (i.e., what is unique about the Company experience).

If credibility procedures are used in estimating loss trends, the selection of the credibility criterion must be disclosed, the application of the credibility standard must be presented, and the complement of credibility must be disclosed and supported.

Selected loss trends must be supported with an analysis of the indicated loss cost changes using an appropriate loss trend methodology. Loss trend selections that do not follow the indicated loss trends must be rationalized and explained. Supporting documentation would include the date to which future trend is applied and the calculation of the average accident date.

The length of the trend period will depend on the term of coverage offered by the Company, the proposed effective date, and the valuation date of the loss data. Each of these items must be disclosed. If the trend is divided into past trend and future trend components, each component must be fully disclosed and supported in the detail described above including the date to distinguish between past and future trends. A narrative explaining the difference between the past and future trends must be included.

Loss cost trends are generally sufficient. However, frequency and severity trends are often reviewed and analyzed separately in the selection of trend factors, but correlations between frequency and severity should be considered.

In the case of non-private passenger vehicle trends where the industry data in Nova Scotia may not be fully credible, Atlantic Canada data is preferred over Canadian data, if sufficient. Otherwise, Canadian data may be used in place of Nova Scotia data.

C-3.b.3. Treatment of Large Losses

The filing must clearly indicate how large losses in the experience period have been handled. If losses have been capped, the number of such losses and the effects of the large loss cap must be demonstrated. Loss development data on a capped basis should be provided to support the estimation of ultimate losses on a capped basis.

A long period must be used in estimating the large loss provision to minimize statistical variations over years.

The Company should ensure that large losses do not cause significant instability in the rates from one period to the next.

C-3.b.4. Catastrophe (or Excess Claim) Procedure

Comprehensive, Specified Perils, and All Perils coverages are subject to losses arising from natural catastrophes. If a procedure is used to estimate the impact of such losses, that procedure must be included in this subsection.

The specific catastrophe procedure used must be outlined and the details of the calculations must be disclosed and supported. All judgments associated with the process of calculating the catastrophe provision must be disclosed in detail and supported.

The catastrophe procedure should make use of the Company's own data to the extent possible, augmented where necessary by other relevant data. All data used in calculating a provision for catastrophe losses must be exhibited and labeled.

C-3.b.5. Other Adjustments

Any other adjustments to the loss data must be disclosed, documented, and supported in this subsection. Examples include changes to Harmonized Sales taxes or Insurance Reform.

Data must be exhibited and labeled, procedures must be outlined, and changes from the prior rate filing must be noted.

C-3.c. Allocated Loss Adjustment Expenses (ALAE)

If ALAE are considered separately from losses, the Company should provide the same detailed information as for the losses in **subsection C-3.b.**

C-3.d. Unallocated Loss Adjustment Expenses (ULAE)

The specific ULAE approach used must be outlined and details of the calculations must be disclosed and supported. All judgments associated with the estimation of ULAE must be disclosed in detail and supported.

The estimate of ULAE must make use of the Company's own data for each category of insurance and coverage to the extent possible. Should the Company find it necessary to include outside data or a different source of internal data, the filing must identify the source of the data and provide an explanation of its applicability in the instant circumstance. All data used in the process of estimating ULAE must be exhibited and labeled (e.g., are the ULAE paid or incurred, calendar year or accident year).

Where the ULAE varies significantly from the industry average, further detail must be provided. Also, where the ULAE varies significantly from the information submitted, by the Company, to GISA, further detail must be provided.

C-3.e. Premium

The premium data must be described in this subsection. The experience period and the source of the premium data must also be disclosed. Direct premiums (i.e., prior to any reinsurance transactions) must be the basis for ratemaking. Direct premiums must not include premiums for the Facility Association Residual Market risk business.

Finance fees or charges collected through premium instalment plans, as well as the associated costs, should be separately identified, both as a dollar amount and as a percentage of premiums. Premium payment patterns may be adjusted for policies with premium instalment plans. As well, the delay in collection of premium should be documented and a factor applied. As noted in **subsection C-3.f.** below, the finance fee revenues should be taken into consideration in calculating the rate level change need - either as an additional percentage of premiums or a reduction to the expense provision. In either case, it should be clearly presented and supported in the documentation.

C-3.e.1. On-level Adjustments

If the Company uses a loss ratio approach to ratemaking, earned premiums must be adjusted to the level of the present rates through the use of an appropriate on-level procedure. Both the unadjusted and the adjusted premiums must be displayed.

If on-level adjustments are made by means of a factor approach (e.g., parallelogram), the calculations must be disclosed. If on-level adjustments are made by means of calculating premiums at present rates through computer re-rating of policies (i.e., extension of exposures), a description of the process must be provided with a comparison of the results to the results obtained using the parallelogram method. Any significant difference must be explained.

Where the Company has a premium dislocation cap that results in some clients paying less (positive cap) or more (negative cap) than the actual approved premium, on-level premium must be adjusted to an uncapped level.

The Company's history of rate changes for each coverage for the prior five years must be included in this section.

C-3.e.2. Premium Trend

Premium trend must be considered for coverages with inflation-sensitive exposure bases or for coverages where a changing mix of exposures may result in a corresponding change in premium income to the Company. The changing mix of exposures with respect to the makes and models of cars for physical damage coverages is an example of a change in mix of exposures, which could produce premium trend. Under Canadian Loss Experience Automobile Rating (CLEAR), premium trend is already accounted for in the development of the rate groups.

The specific premium trend approach used in the filing must be outlined and details of the calculations must be disclosed and supported. All judgments associated with the process of premium trend must be disclosed in detail and supported.

Premium trend must make use of the Company's own data to the extent possible. Should the Company find it necessary to include outside data or a different source of internal data, the filing must identify the source of the data and provide an explanation of its applicability in the instant circumstance. All data used in the process of estimating premium trend must be exhibited and labeled.

C-3.e.3. Other Adjustments

Any other adjustments to the premium data must be disclosed, documented, and supported in this subsection.

Data must be exhibited and labeled, procedures must be outlined, and changes from the prior rate filing must be noted. The impact of any changes in approach must be disclosed.

C-3.f. Other Expenses

Other expenses (i.e., non-claims related expenses) must be divided between exposure variable (fixed) and premium variable (variable) expenses in a manner that is consistent with the way the Company conducts its business, the manner in which expenses are incurred, and the type of units insured. The details of this segregation of expenses must be disclosed and documented.

Where the Company is proposing to vary rates based on the type of distribution system, separate expense statistics must be maintained and filed in support of the rates (at least the three most recent years of Company experience). In particular, selected expense levels that are not in line with Company experience must be fully explained.

An acceptable approach is to treat commissions and premium taxes as premium variable expenses and treat half or all of other expenses as fixed expenses. Treating all general expenses as a variable of premiums is generally inappropriate. Fixed expenses may be allocated to mandatory coverages. The Board also accepts allocation of fixed expenses across all coverage.

The Company must provide an analysis reflecting the impact of any changes in expense allocation approach from previous filings as outlined in the introduction of **section C-3**.

The allocation of expenses for the current year to the category of insurance filed must be reported.

There must be no expense provision established in respect of the Facility Association Residual Market. The Risk Sharing Pool should be treated as direct business and therefore should be reflected in the direct loss and premium data. No additional expense must be provided for by servicing carriers in respect of servicing Facility Association business because such costs are reflected in the rates charged by the Facility Association.

There should be no inclusion of expenses associated with reinsurance costs, and any profit or loss effects from the residual market cannot be included as an element of general expenses.

Finance fee revenues should be separately and clearly identified. The finance fee revenues can either be treated as additional premiums or a negative expense (in either case as a percentage of premiums) in calculating the rate level change indication.

The Company must provide support for its provisions for other expenses, and must adequately explain an expense provision that is significantly higher than the industry average expense provision set out in the most recent GISA “Automobile Insurance Financial Information Report.” Any one-time expenses that create significant variances in one or more years must be explained.

Any differences between the filed expenses and those submitted, by the Company, to GISA for the Financial Information Report, should be explained.

C-3.f.1. <u>Exposure Variable Expenses (Fixed)</u>

Some expenses can be expected to vary in relationship to the number of units insured (exposures) rather than in relationship to the premium volume.

The specific approach to estimating exposure variable expenses used in the filing must be outlined and details of the calculations must be disclosed. All judgments associated with the process of estimating exposure variable expenses must be disclosed in detail and supported.

Exposure variable expenses must make use of the Company's own data. Should the Company find it necessary to include outside data or a different source of internal data, the filing must identify the source of the data and provide an explanation of its applicability in the instant circumstance. All data used in the process of estimating exposure variable expenses must be exhibited and labeled.

Exposure variable expenses are subject to trend. The elements of trend discussed in **subsection C-3.b.2.** apply to this subsection as well.

C-3.f.1.a Health Services Levy

Pursuant to the *Health Services and Insurance Act*, the Government of Nova Scotia assesses an annually adjusted amount to industry to cover the cost of health services provided to victims of automobile accidents. The annual levy is set as a dollar amount per insured vehicle. For example, for 2017, the levy was set at $33.09. The amount of the levy is reset annually, usually in January. The Superintendent of Insurance usually sends a bulletin with the revised number.

The amount included for Health Cost Recovery must be determined by multiplying the latest levy amount by the number of vehicles insured for each year in the experience period. This amount is then applied to Bodily Injury coverage as an additional fixed expense.

C-3.f.2. Premium Variable Expenses (Variable)

Some expenses can be expected to vary in relationship to the premium volume rather than in relationship to the number of units insured.

The specific approach to estimating premium variable expenses used in the filing must be outlined and details of the calculations must be disclosed. All judgments associated with the process of estimating premium variable expenses must be disclosed in detail and supported.

Premium variable expenses must make use of the Company's own data. Should the Company find it necessary to include outside data or a different source of internal data to estimate these expenses, the filing must identify the source of the data and provide an explanation of its applicability in the instant circumstance. All data used in the process of estimating premium variable expenses must be exhibited and labeled.

C-3.f.2.a Contingent Commissions

The Board does not prohibit the inclusion of contingent commissions. However, the amount must be reasonable and supported.

Where premium variable expenses include an element for contingent commissions (or profit commissions, contingent profit commissions, etc.), the Company must outline the basis upon which contingent commission payments are determined.

The provision should reflect the level of commissions expected to be paid if any experience related bases for such payments reflect the projected level used in the application. Any long term goals or targets for such payments should be stated.

The Board is unlikely to approve any filing that contains a contingent commission provision that is higher than the industry average. Where such a provision is proposed, the Company must provide rationale and support for why the proposed level of the provision should be allowed.

C-3.g. Profit Provision

The Board believes that while the Company should include a provision for profit in its rates, the level of the provision should fall within a reasonable range. The Board has expressed this in different ways including a return on equity and a return on premium approach. On each basis, the Board has established ranges of reasonability that it periodically reviews.

The Board generally views a return on equity of **10%-12%** as being reasonable. This level presumes the use of a premium to surplus ratio around 2:1 but as low as 1.5:1, where justified.

The Board also allows for the use of return on premium approach to be used to reflect profit. Towards this end, the Board generally views a range of **5.5%-7%** as a reasonable level.

Where the GISA Financial Information Report provides evidence that the average return on equity for the industry is running outside the Board range, the Board tends to require indications to reflect the lower end of either the return on equity range or the return on premium range. Recent decisions of the Board will provide guidance on where the Board stands on this position at any time.

The target return on equity and return on premium must be set forth in this subsection. The formula below can be used to derive the other where one of the two approaches is selected by the Company.

$$\boldsymbol{ROP = \left[\left(ROE \div (1 - t)\right) - IRSA\right] \div PSR}$$

Where: ROP is return on premium;
ROE is after tax return on equity;
t is provincial tax rate (currently 31%);
$IRSA$ is Investment return on surplus assets; and
PSR is the numerator of the premium to surplus ratio (i.e., 2 if ratio is 2:1)

Investment return on surplus assets should reflect the use of longer term assets and should also consider the returns achieved on the portfolio of assets rather than the current new money rates.

All costs, including expected claims costs and expense costs, must be discounted to reflect the investment income on policyholder supplied funds (i.e., cash flow), before the inclusion of the underwriting profit provision.

The Company must provide the basis of the selected investment return assumption in discounting, and compare it with the actual investment returns earned in the recent past. Assumed claims payment patterns must be supported by paid loss development information. While the expected investment returns should consider new money rates, the Board anticipates that the expected investment return will be close to the actual investment return the Company earned within the recent past. Significant differences must be explained and justified.

If the proposed rates are different from those which are actuarially indicated based on the target underwriting provision, the Company must provide the proposed underwriting provision underlying the proposed rates. The proposed return on equity and return on premium must also be disclosed. If the proposed ROE is below 10%, the Company should explain why it is willing to accept the lower ROE.

All data used in the process of selecting the target return on equity and the resulting target underwriting profit margin must be exhibited and labeled. At a minimum, the pay-out pattern (for each coverage and sub-coverage, where appropriate) expected to apply to the losses and expenses must be disclosed and supported.

To put the impact of the lower end of the ROE range into perspective, where the selected target ROE is greater than 10%, the Company must provide indications by coverage indications using 10% ROE. Also, if the Company did not use the Benchmark Trends for loss trends, the Company also must provide indications using both a 10% ROE and the Benchmark Trends.

Where recent Board decisions suggest the industry should use a lower ROE than the target selected, the Company should explain why it is different from the industry so that the Board should approve a higher ROE or profit provision.

Furthermore, if the Company is using loss trends that differ from the Benchmark Trends, the proposed return on equity and return on premium produced by the proposed rates assuming the use of the Benchmark Trends in the indications must also be provided.

C-3.h. Credibility

The Nova Scotia experience of the Company may not be of sufficient volume to produce stable overall province-wide rate level indications that are actuarially credible. In such cases, credibility procedures can be useful as a means of augmenting the Company's Nova Scotia data.

The approach to credibility can be expected to remain reasonably constant over the years for the Company. Any changes from the prior rate filing in the credibility standards, procedures and the complement of credibility must be disclosed and supported.

C-3.h.1. Credibility Standards

The standard for 100% credibility and the formula for calculating partial credibility must be disclosed with an explanation regarding their derivation and application in the filing.

Credibility standards based on claim counts that have been developed to ultimate levels are acceptable. Exposure based credibility or expected claims credibility are also acceptable approaches especially for territorial indications.

A commonly used standard of **1,082** claims for short tail, low severity/low volatility coverage, such as property damage and physical damage, is considered reasonable. The use of a higher standard in long-tail, high severity/high volatility coverage in the form of a multiplier of the base standard, is considered reasonable.

Until enough experience years with Bodily Injury, Property Damage-Tort, and DCPD have emerged, splitting of Third Party Liability into Bodily Injury and Property Damage (i.e., Property Damage-Tort and DCPD combined), and assigning separate credibility standards prior to bringing them back together is the preferred approach.

It is expected the standard for full credibility for loss trends would be higher than the standard selected for the Company loss experience period (usually 3 to 5 years) used to determine the rate indications.

C-3.h.2. Credibility – Complement of Credibility

The data source used as the ballast to which the complement of credibility applies must be disclosed and supported.

In calculating the complement of credibility, which incorporates or requires trending, it is acceptable for the trend period to be from the effective date of the current rates to the effective date of the proposed rates, which may be more or less than one year.

If prior filing indications/loss ratios are utilized in the credibility complement and the Board required changes to the Company indications to obtain the Board indications, the Company must adjust its prior indication for these changes before utilizing it in the current credibility complement. Any adjustment for rate inadequacy, therefore, would be measured by comparing the previously approved rates to the Board indications.

If an alternative body of data experience (e.g., industry data) is used as a credibility complement, exhibits must be included to show the adjustments made to this data for risk distribution differences. Differences in loss costs or loss ratios due to differences in risk characteristics (other than distributional differences) between the data groups should be considered and adjusted where appropriate.

However, in the case of non-PPV lines and very specialized companies, an adjustment of industry data to match Company mix may distort values more than not adjusting the alternative data at all. In these instances, the Company must provide an explanation and rationale for not making the adjustment noted.

C-3.i. Other Adjustments

Any other adjustments made to the data, which affect expected premium or losses must be quantified and their effect on the rates must be disclosed and supported in this section.

C-3.j. Summary Rate Level Indications

Summary sheets must be provided showing how the data combines with the adjustments and provisions outlined in **subsections C-3.b. to C-3.i.** The Company may use forms that are relevant to its situation.

The indicated rate change should be based on at least three consecutive years of the most recent actual experience. An appropriate weight should be applied to each year based on actuarial judgement. If these weights are different from the Company's prior filing, the change must be disclosed, explained, and supported. The impact of the change in weights also must be disclosed.

Proposed rate changes should be in the same direction as the indicated rate change direction at the coverage level. For example, if the indicated rate change for Bodily Injury is positive and the indicated rate change for Accident Benefits is negative, the Board expects a proposed increase in the rates for Bodily Injury and a proposed decrease in the rates for Accident Benefits, even though both Bodily Injury and Accident Benefits are mandatory coverages. In the case where discrepancy is present, explanations should be provided.

If the proposed rates result in a significant cross-subsidy amongst coverages, this should be disclosed and the detailed rationale for such subsidies should be provided. If such subsidies existed in recent applications, the Company should comment on why the Board should allow the subsidy to continue.

Significant differences at the coverage level, and overall, between the indicated and proposed rate changes must be explained in detail. Where this also has been the case in recent filings, the Company must explain why this practice should be allowed.

C-3.k. Territorial Indications

To qualify as a mandatory filing, the Company must either include an analysis of the current territorial differentials or provide territorial indications. In any filing, where the Company proposes changes to territories or differentials, this section must be completed.

C-3.k.1. Indicated Differentials and Proposed Differentials

The Company must outline its ratemaking process for territorial differentials in detail including the specifics of any market influences.

Territorial indications must be calculated by making use of the Company's own data. Should the Company find it necessary to include outside data or a different source of internal data, the filing must identify the source of the data and provide an explanation of its applicability in the circumstances. All data used to develop territorial indications must be exhibited and labeled.

A comparison of the current, indicated, and proposed (if changes are being made) territorial differentials must be provided by coverage. Proposed changes should be in the direction indicated. Any capping applied to the differentials should be disclosed. Where deviations beyond capping from indications are proposed, the rationale for the deviation must be provided in detail. Included in this section should be the written premium distribution and the exposure distribution by coverage, by territory.

If credibility procedures are used, they must be disclosed and supported in the same detail as outlined in **subsection C-3.h**.

The general approach to calculating territorial differentials can be expected to remain reasonably constant over the years for the Company. Any changes in either the approach or the underlying data from the prior rate filing should be disclosed and supported.

Costs must be fairly allocated between territories.

The rates for newly formed adjoining territories should not vary dramatically unless the Company provides experience data supporting a larger deviation.

C-3.k.2. Off-balance

The aggregate premium may be increased or decreased through the introduction of new territorial rates or rate differentials or by changes to existing ones. The filing must account for these changes through the use of off-balance procedures or by accounting for the premium change in its rate level. [If the change in territorial differentials is not off-balanced and instead a rate level change is generated, **subsections C-3.a. to C-3.j.** must also be completed.]

All data used in the process of calculating the off-balance must be exhibited and labeled. The calculation of the off-balance amount must be shown. All judgments associated with the process of calculating the off-balance must be disclosed and supported.

Off-balance calculations must make use of the Company's own distribution of business. Should the Company find it necessary to include outside data or a different source of internal data, the filing must identify the source of the data and provide an explanation of its applicability in the instant circumstance.

The general approach to calculating the off-balance can be expected to remain reasonably constant over the years for the Company. Any changes in either the approach or the underlying data from the prior rate filing should be disclosed and supported.

C-3.k.3. Definitions

Any changes to territorial boundaries or definitions must be accompanied by colour maps showing current and proposed territorial boundaries as appropriate. The Company must fully support any proposed changes to their territory definitions (e.g., provide Forward Sortation Area (FSA) analysis or comparison of new and old territory experience).

Territories are generally expected to be geographically contiguous unless the Company provides support and rationale for a variance from this constraint. The Company should be aware not to rely exclusively on Canada Post's FSA or postal code assignments when creating territories as the manner used by Canada Post to assign postal codes and FSA's may introduce issues of non-contiguity.

Note, the Company cannot change territorial rates without an approved filing simply because Canada Post has made changes to postal codes.

A common territorial definition is generally expected to be used for all coverages unless a Company provides support and rationale for a deviation.

C-3.l. Implementation of New Rate Group Differentials, including CLEAR (if applicable)

The Company may use these guidelines or Simplified CLEAR Filing Guidelines (if eligible) if changes to vehicle rate group differentials are being proposed.

Even if the Company is simply updating the annual vehicle rate group tables, the rate group drift must be considered. The Company is NOT allowed to off-balance premium impact due to rate group updates to coverages that do not have rate group as a rating variable.

The procedures used for replacing the Company's current rate group methodology and implementing a new methodology must be fully described in this section. The technical information required must be comprised of the following subsections, ***in the order set out below***.

C-3.l.1. Overall Description for Implementing A New Rate Group Methodology

This section should indicate the Company's approach for implementing the new rate group methodology or CLEAR table. The rate group table that is being used and capping procedures, if any, should be described in this section. A list of vehicles, by make, model and model year, that have been capped, should also be provided.

Note, a copy of the CLEAR table is not required to be included with the application. The Company need only indicate the name and version of both the current table being used and the proposed table is sufficient.

C-3.l.2. Off-balance

The aggregate premium may be increased or decreased through the introduction of a new rate group methodology or CLEAR table. The filing must account for these through the use of off-balance procedures or by accounting for the premium change in its rate level. If the change is not off-balanced, and instead a rate level change is generated, **subsections C-3.a. to C-3.j.** must also be completed.

All data used in the process of calculating the off-balance must be exhibited and labeled. The calculation of the off-balance amount must be shown. All judgments associated with the process of calculating the off-balance must be disclosed and supported.

Off-balance calculations must make use of the Company's own distribution of business. Should the Company find it necessary to include outside data or a different source of internal data, the filing must identify the source of the data and provide an explanation of its applicability in the instant circumstance.

C-3.m. Classification/Limit of Liability/Deductible, or Other Rate Differential Indications

If the Company is proposing no changes to these risk-classification factor differentials, omit the requirements under this subsection C-3.m.

C-3.m.1. Indicated Differentials

If the Company is requesting changes in classification differentials, limit of liability differentials, deductible differentials, or other rate differentials, the ratemaking process must be outlined in detail.

Classification, limit of liability, deductible, and other rate differential indications must make use of the Company's own data. Should the Company find it necessary to include outside data or a different source of Company data, the filing must identify the source of the data and provide an explanation of its applicability in the instant circumstance. All data used in the process of developing classification, limit of liability, deductible, or other rate differential indications must be exhibited and labeled.

A comparison of current, indicated, and proposed differentials must be provided for each coverage for which classification, limit of liability, deductible, or other rate differentials are changing. Included in this must be the written premium distribution and the exposure distribution by classification, limit of liability, deductible, or other rate differentials.

When a predictive model or some other analytical pricing method such as the Generalized Linear Model (GLM) or Generalized Additive Model (GAM) is used to analyze the proposed classification variables and rating differentials, a complete description of the model, data source, data variables, and assumptions must be provided. When different data segments are used in the analysis, details of the data and any adjustments made to the data prior to application should be clearly provided.

The method of selecting the classification variables based on this alternate analysis must be outlined. Model results should be included to sufficiently show the correlation of the results between variables. If judgment is applied in the inclusion or exclusion of the variables in the proposal, the basis of the judgment should be provided.

If credibility procedures are used, they must be disclosed in the same detail as outlined in **subsection C-3.h**.

The Company must include a comparison of indicated and proposed relativities with an explanation of differences. Proposed changes should be in the direction indicated. Where the proposed differentials differ from the indicated differentials, the reasons for the deviation must be provided.

The general approach to calculating rate differentials can be expected to remain reasonably constant over the years for the Company. Any changes in either the approach or the underlying data from the prior rate filing must be disclosed and supported.

C-3.m.2. Off-balance

The aggregate premium may be increased or decreased through the introduction of new classification, limit of liability, deductible, or other rate differentials or by changes to existing ones. The filing must account for these changes through the use of off-balance procedures or by accounting for the premium change in its rate level. If the change in classification, limit of liability, deductible, or other rate differentials is not off-balanced and instead a rate level change is generated, **subsections C-3.a. to C-3.j.** must also be completed.

All data used in the process of calculating the off-balance must be exhibited and labeled. The calculation of each off-balance must be shown. All judgments associated with the process of calculating the off-balance must be disclosed and supported.

Off-balance calculations must be based on the Company's own distributions of business by classification, limit of liability, deductible, or other rate differential. Should the Company find it necessary to include outside data or a different source of internal data, the filing must identify the source of the data and provide an explanation of its applicability in the instant circumstance.

The general approach to calculating the off-balance can be expected to remain reasonably constant over the years for the Company. Any changes in either the approach or the underlying data from the prior rate filing must be disclosed and supported.

C-3.n. Rating Based on Group Membership

This section **must** be completed by any Company that is introducing or proposing changes to its rates and risk classification system based on group membership. ***When no changes to existing group discount program are proposed, omit this subsection C-3.n. requirement*.**

C-3.n.1. Group Membership Definition

There are restrictions on when group membership can be used in a risk classification system. These restrictions are outlined in the *Matters Considered in Automobile Insurance Rates and Risk-Classification Systems Regulations* made under Section 159 of the Insurance Act R.S.N.S. 1989, c. 231 O.I.C. 2003-458 (October 31, 2003), N.S. Reg. 183/2003 as amended to O.I.C. 2016-54 (February 29, 2016), N.S. Reg. 39/2016.

No element of a risk classification system shall use membership in an **organized** group unless the group is:

(a) a group of employees, which may include retired employees, of the same employer; or

(b) a group of persons that is,

(i) a labour union,

(ii) a professional or occupational organization,

(iii) an alumni association, or

(iv) a non-profit organization that has been in existence for at least two years, except an organization that is formed primarily for the purpose of purchasing or providing goods or services.

Only members (and possibly spouse and children of members) of such groups referred to above are eligible for preferential rates under a risk classification system based on group membership.

The Company must define its group classification in sufficient detail to qualify it as an organized group in accordance with the *Matters Considered in Automobile Insurance Rates and Risk-Classification Systems Regulations.*

C-3.n.2. Indicated Discounts or Rates

The ratemaking process must be outlined in detail where a Company proposes (a) a discount or schedule of rates based on membership in a group; or (b) discounts or a schedule of rates that vary among groups.

A discount or a schedule of rates based on group membership should be based on lower loss costs based on favourable experience, or risk management programs, or identifiable characteristics of a group that would result in lower loss exposure or lower expenses based on lower administrative expense or lower acquisition cost.

A Company must maintain separate premium and loss statistics to support a discount or schedule of rates based on group membership. The basis of the discount or rates must be defined in sufficient detail so that naming individual organizations is not necessary. A Company is **not** expected to develop a unique discount or schedule of rates for a specific group unless such a group is of sufficient size that its own experience supports such a discount or schedule of rates. Support for discounts and rates must be actuarially credible and therefore only in the instance of large groups would a unique discount or schedule of rates be appropriate. In the case where more than one discount is proposed (e.g., variation of discounts based on types of groups), a list of groups and discounts applicable is required to be submitted with the filing, as well as on a periodic basis.

The Company's own loss data must be used to the extent possible. If the Company finds it necessary to include outside data or a different source of Company data, the Company must identify the source of the data and provide an explanation of its applicability. All data used in the process of developing the indicated discounts or rates based on group membership must be exhibited and labeled.

A comparison of current, indicated and proposed discounts or rates must be provided for each coverage when a change is proposed. Included in this must be the written premium distribution and the exposure distribution by discounts or schedule of rates.

If credibility procedures are used, they must be disclosed in the same detail as outlined in **subsection C-3.h**.

The general approach to calculating discounts or rates based on group membership can be expected to remain reasonably constant over the years. Any changes in either the approach or the underlying data from the prior rate filing should be disclosed and supported.

C-3.n.3. <u>Off-balance</u>

The aggregate premium may be increased or decreased through the introduction of new discounts or rates, or by changes to existing ones. The filing must account for these changes through the use of off-balance procedures or by accounting for the premium change in its rate level. If the change in discount or rate is not off-balanced and instead a rate level change is generated, **subsections C-3.a. to C-3.j.** must also be completed.

All data used in the process of calculating the off-balance must be exhibited and labeled. The calculation of each off-balance must be shown. All judgments associated with the process of calculating the off-balance must be disclosed and supported.

Off-balance calculations must be based on the Company's own distribution of business for group discounts or schedule of rates. Should the Company find it necessary to include outside data or a different source of internal data, the filing must identify the source of the data and provide an explanation of its applicability in the circumstances.

The general approach to calculating the off-balance can be expected to remain reasonably constant over the years. Any changes in either the approach or the underlying data from the prior rate filing should be disclosed and supported.

C-3.o. Usage Based Insurance (UBI) Discount Programs

The Company is required to file appropriate actuarial support to have discounts approved by the Board. For UBI discount programs, the Company may use these guidelines, or if the only change proposed is to UBI Discount, the simplified UBI filing requirements (*Rate Filing Requirements for Automobile Insurance – Section 155G – UBI Discount Program*) may be used.

The Board recognizes that initially there will be little or no Nova Scotia-specific data to provide in a filing. However, the Board is supportive of innovation and is willing to review data and the discounts charged in other jurisdictions. The Company may support their initial UBI discount program filing with any reasonable existing data available to the Company.

The Company will be expected, in future mandatory filings, to include Nova Scotia-specific data to support continued inclusion of a UBI discount program once it becomes available (i.e., within two years following the effective date of the program).

UBI-related rates and risk classification system elements must be just, reasonable and meet the statutory standards applicable to all rates and risk classification systems.

There are generally two forms of UBI discount programs:

- The first form uses a telematics device installed in a vehicle for a period of time to determine the UBI discount to assign to the policyholder. Such discount will stay on the policyholder's record unchanged.
- The second form continuously updates the policyholder's UBI discount by monitoring driving behaviour based on an approved calculation method. With this form, the Company must clearly state how the midterm discount adjustments are to be handled. It is not acceptable to remove all or part of a UBI discount midterm.

As more companies launch UBI discount programs, their mix of business and some of the existing rating factors may be impacted (e.g., distance driven). The Company is reminded of their ongoing data reporting obligations through the GISA after the approval of their UBI discount program.

If the Company determines that any of the criteria initially used to determine prospective UBI discounts needs to be changed, the Company will be required to re-file its UBI discount program with necessary adjustments with the Board. For example, if the majority of participating consumers do not qualify for a discount in premiums in subsequent renewal periods, the Company may need to consider whether the rating factors need to be recalibrated (e.g., rating factors such as speed, acceleration or braking).

In the first and subsequent mandatory filing after the UBI discount program has been in place for one full year, the Company must account for any differences between the actual and the actuarially-projected average UBI discount and, as a result, the average rate level changes that flow from the discount.

C-3.o.1 Description of the UBI Discount Program

The Company must provide a description of the UBI discount program, which includes or covers:

a) The enrollment process;
b) The length of time the driver behavior will be monitored;
c) The criteria for a policyholder to receive a discount;
d) The frequency of changes to a policyholder's UBI discount;
e) Information to be provided to the insureds before and after they choose to opt into UBI discount program;
f) The process for handling mid-term changes, such as vehicle replacement;
g) The cancellation process; and
h) A declaration that lost revenue due to the proposed UBI discount program will not be off-balanced to base rates.

C-3.o.2 Reasonableness of the Proposed UBI Discounts

The Company must demonstrate that the proposed UBI rating factors and discounts are just, reasonable and meet the statutory standards applicable to all rates and risk classification systems.

To that end, this section must clearly identify and present:

a) What rating factors/driving behaviours (e.g., acceleration or deceleration rates, speed, distance travelled) are being considered in determining the UBI discounts;
b) How the rating factors/driving behaviours are measured (e.g., frequency, occurrence, relevant thresholds);
c) How data under the UBI discount program is to be collected, normalized, categorized and used for rating purposes (e.g., total occurrences averaged);
d) What available data/relevant claim experience (e.g., claim severity, claim frequency, loss costs) was used to support the significance of each rating factor being used in the UBI discount program;
e) What available data was used to support the proposed discounts, including how UBI-related expenses are considered in developing the proposed discounts; and
f) How the UBI discounts will be applied (e.g., how the rating factors map into the proposed discounts, the amount of the proposed discounts, the coverages to which the proposed discounts will be applied, frequency of re-calibration of a policyholder's discount, etc.)

C-3.o.3 Application of UBI Discounts in Premium Determination

The Company must clearly explain how the UBI rating factors lead to the policyholder's UBI discount and how the discount is applied in determining the policyholder's premium.

At each filing, a side-by-side comparison of the Company's current and proposed UBI rating algorithm must be presented, with proposed changes highlighted.

C-3.o.4 UBI Discount Program Costs and the Impact on Company Expenses

The Company's expenses are an important component in rate determination. The Company must clearly demonstrate the up-front or start-up costs associated with developing and introducing a UBI discount program, as well as all ongoing maintenance and other expenses associated with offering the program, including but not limited to:

- all costs associated with the UBI device,
- data transfer and analysis,
- marketing, and
- any third-party provider contracts.

The Company must include the expense information in a filing regardless of whether the Company has factored this cost into the expense provision assumptions. The Company may treat start-up costs as part of research and development and not specifically allocate them. It is expected that over time, the on-going operational costs will be borne only by those enrolled in the UBI discount program.

The Board will be sensitive to the allocation of these expenses and the issue of UBI discount program costs being borne by policyholders not participating in the program.

C-3.o.5. Interim Reporting

Following an initiative currently in place by Financial Services Commission of Ontario, the Board will require interim information reports to be filed between the mandatory filing deadlines for risk-classification systems that include a UBI discount program at one year intervals. The first report will be due one year from the new business effective date of the introduction of a UBI discount program.

The interim update reports will assist in tracking the experience with the new UBI discount program model, including adoption rates, average discounts, and any issues that the Company observed. This may include consumer feedback and complaints, issues with the selected variables or with the methodology used to calculate the discount.

The following information is to be included in these interim reports:

[a] Enrollment or adoption rates for new business - total policies written in the period, total policies enrolled in UBI discount program, take-up rate as a percent and quarterly change as a percent from quarter to quarter (approximately every 3 months).

[b] Renewal business – total policies renewed in the period, total policies enrolled in UBI discount program, take-up rate as a percent and quarterly change as a percent from quarter to quarter (approximately every 3 months).

[c] Distribution of discounts earned and average overall discount earned by policyholders (%) (including scores for each variable/driving characteristic (e.g., time, braking, kms driven if available)) in the reporting period.

[d] Number of named insureds who opted out of or exited the program during the reporting period.

[e] Any observations with respect to the educational effectiveness of the Company's UBI program, including any changes or improvements in driving behaviour.

[f] Any observations with respect to the performance of UBI discount program variables and any corresponding impact on claims experience for those variables.

[g] Report on expenses and costs associated with the UBI discount program in the reporting period.
[h] Report on any technical issues encountered with devices or data management, transmission or storage, in the reporting period.
[i] An account of the annual changes in the average UBI discount and, as a result, the average rate level changes flowing from the discount, at each one year anniversary of the introduction of the discount.

C-3.p. Introduction of New Rating Variable(s)

The Company may introduce other new rating variable(s) into their rating programs. Data should be provided in support of a new rating variable. The Board will consider non-Nova Scotia data, provided they are credible and relevant to the current Nova Scotia product.

Where the Company is introducing a rating variable to its algorithm, the approach used in costing and a general narrative of the process must be outlined in detail.

<u>C-3.p.1.</u> <u>Indicated Differentials</u>

Rate differential indications should make use of the Company's own data where possible. Should the Company find it necessary to rely on outside data or a different source of Company data, the filing must identify the source of the data and provide an explanation of its applicability in the analysis. All data used in the process of developing rate differential indications for a proposed rating variable must be exhibited and labelled.

A comparison of the indicated and proposed differentials must be provided by coverage to which the proposed rating variable would apply. Included in this should be the written premium distribution and the exposure distribution.

When a predictive model or some other analytical pricing methods such as the Generalized Linear Model (GLM) or Generalized Additive Model (GAM) is used to analyze the proposed classification variables and rating differentials, a complete description of the model, data source, data variables and assumptions must be provided. The result derived from traditional methods such as loss ratio method should also be provided to reconcile general direction.

The method of selecting the classification variables based on this alternate analysis must be outlined. Model results should be included to sufficiently show the correlation of the results between variables. If judgment is applied in the inclusion or exclusion of the variables in the proposal, the basis of the judgment should be provided.

If credibility procedures are used, they must be disclosed in the same detail as outlined in **subsection C-3.h.**

The Company must include a comparison of indicated and proposed relativities with an explanation of differences. Proposed changes should be in the direction indicated.

The general approach to calculating rate differentials can be expected to remain reasonably constant over the years for the Company. Any changes in either the approach or the underlying data from the prior rate filing must be disclosed and supported. The Company must test for and avoid reversals in its proposed differentials.

C-3.p.2. Off-balance

The aggregate premium may be increased or decreased through the introduction of a new rating variable. The filing must account for these changes using off-balance procedures or by accounting for the premium change in its rate level. If the introduction of the new rating variable is not off-balanced and instead a rate level change is generated, **subsections C-3.a. to C-3.j**. must also be completed.

All data used in the process of calculating the off-balance must be exhibited and labelled. The calculation of each off-balance must be shown. All judgments associated with the process of calculating the off-balance should be disclosed and supported.

Off-balance calculations should be based on the Company's own distributions of business by classification, limit of liability, deductible, or other rate differential. Should the Company find it necessary to rely on outside data or a different source of internal data, the filing must identify the source of the data and provide an explanation of its applicability in the circumstance.

The general approach to calculating the off-balance can be expected to remain reasonably constant over the years for the Company. Any changes in either the approach or the underlying data from the prior rate filing should be disclosed and supported.

C-3.q. Endorsements

If the Company is making no changes to endorsements nor is it adding or removing any endorsements, omit the requirements under this subsection C-3.q.

The Company must file appropriate support for changes to its endorsements to have them approved by the Board. The Company may use these guidelines, or if the only change proposed is to endorsements, the simplified Endorsement filing requirements (*Rate Filing Requirements for Automobile Insurance – Section 155G – Endorsements*) may be used.

C-3.q.1 Revision to Current Endorsements

The Company must provide its own loss experience to support the changes. If such experience is not available, the Company must provide the information that it used in its decision-making to set the rates, and must explain why it is relevant.

C-3.q.2 Introduction of New Endorsements

The Company may introduce new endorsements into their rating programs. If non-standard wording is being used for the endorsement, the Board will require approval of that wording by the Superintendent of Insurance before addressing any rate issues. If the Company uses a Standard Endorsement Form, no approval from the Superintendent of Insurance is needed.

The Company must provide supporting materials for any premiums that will be charged for the endorsement, in either case.

Section C-4 - Discount/Surcharge Changes

If the Company is making no changes to the level of or the eligibility criteria for discounts or surcharges nor is it adding or removing any discounts or surcharges, omit the requirements under this section C-4.

If the Company is requesting changes in the amount or value of a discount (except a group discount which is disclosed in **subsection C-3.n**) or surcharge, or is introducing a new discount (except a group discount which is disclosed in **subsection C-3.n**) or surcharge, the approach used in costing and a general narrative of the process must be outlined in detail.

The derivation of the discount or surcharge must make use of the Company's own data. The justification for the discount may be due to lower expenses due to lower acquisition costs or lower administrative costs or lower loss costs. The filing must clearly indicate the basis and rationale for the discount or surcharge. The Company must have appropriate information to support the discount or surcharge. Should the Company find it necessary to include outside data or a different source of Company data, the filing must identify the source of the data and provide an explanation of its applicability in the instant circumstance. All data used in the process of developing the discount or surcharge must be exhibited and labeled.

A comparison of current, indicated and proposed discounts or surcharges must be provided for each coverage for which discounts or surcharges are changing. Included in this must be the written premium distribution and the exposure distribution for the discounts or surchargers.

A current and a proposed distribution of the Company's business that is affected by the discount or surcharge change must be provided to determine the average premium change (shift). All assumptions and detailed calculations must be provided to support the rate level change.

Where the Company offers the approval of the proposed discount/surcharge in another jurisdiction as support for the introduction in Nova Scotia, the evidence or support provided to the other regulator to gain approval should be provided.

Section C-5 - Final Rates/Rate Level Change

Exhibits illustrating current and proposed rating algorithms, base rates, discounts/surcharges, and differentials, **clearly identified as either current or proposed**, must be disclosed in this section, including any explanatory material in support of the proposed changes. ***To facilitate the review process, all of C-5.a. – C-5.d. must be included even though the change may be to only one of the elements.***

C-5.a. Algorithm

Exhibits illustrating current and proposed algorithms must be disclosed in this section.

C-5.b. Base Rates

Exhibits illustrating current and proposed base rates must be disclosed in this section.

C-5.c. Differentials

Exhibits illustrating current and proposed differentials must be disclosed here.

C-5.d. Discounts and Surcharges

Exhibits illustrating current and proposed discounts/surcharges must be disclosed here.

C-5.e. Calculation of Final Rates

The filing must clearly describe and show how current manual territorial base rates are transformed into proposed manual territorial base rates through the application of the proposed rate change in combination with any off-balance.

C-5-f. Calculation of Rate Level Change

The filing must clearly describe and show how the rate level impact of changes to base rates, differentials and discounts or surcharges, in combination with any off-balance which may be applied, are used to calculate the overall rate level change on a per coverage basis. This calculation must reconcile with that from **Question CONF-1** in **section C-2**.

C-5.g. Dislocation and Capping

Capping of rates is a tool that the Company may employ to limit dislocation of premium and, thereby, improve retention where revisions to rating programs create substantial changes in the distribution of premium among risk profiles. The principal causes of such dislocation are revision of relativities for existing rating variables or introduction of a new algorithm with new rating variables, though it could relate to acquisition of a portfolio through merger or acquisition.

A Company must consider the impact that proposed rate changes will have on consumers. Information on rate dislocation is required in **Question CONF-8** of **section C-2**.

The Company has the option to cap rates and can use capping provided:

- the capping measure only applies for two annual renewal cycles. However, the Company can request a longer capping period if it can support the need. The Board may approve a longer period after careful analysis;
- the Company provides the estimated impact of the proposal including capping for the first year that the revised rating program is in force;
- no further capping measure can apply to the rating program (e.g., private passenger) until any existing capping exercise is exhausted; and
- the Company provides the "uncapped" overall proposed rate level change along with the "capped" overall proposed rate level.

Any capping procedure must be fully described in this section. The estimated time the capping is expected to be in place must be disclosed. An example of how the capping works at renewal must be included, as well. The Company should also discuss how or when it will remove the cap (e.g. material change in risk).

The Board will allow a Company to cap premium decreases only to offset the cost of capping premium increases. ***However, the impact on total premiums collected from the cap on decreases must be less than that arising from the cap on premium increases. Put another way, the total premium collected on an uncapped basis must be equal to or greater than the total premium collected on a capped basis.***

Section C-6 - Dependent Categories

For those categories of automobile insurance that are dependent on the rate filing submitted, please provide the following:

i) the rate level effects of the proposed changes.
ii) the calculations that validate the rate level effect of the proposed changes,
iii) a copy of the rating rule that stipulates the linkage to the category of automobile insurance, and
iv) **Section N-6** - rating profiles (if any) must be completed for the dependent category of automobile insurance, where applicable.

Section C-7 - Comparison to Industry or Rating Bureau Rates (if applicable)

In those cases where there is insufficient size to warrant an actuarial analysis of the Company's business (e.g., certain Miscellaneous Vehicles), the Board requires the Company to provide one of:

i) a comparison of proposed rates to industry rates;
ii) a comparison of proposed rates to rate proposed by a rating bureau and approved by the Board; or
iii) an analysis of industry data.

The Board encourages the Company to contact Board staff (namely the Senior Advisor, Insurance) to discuss the best way to provide information under this section.

C-7.1 Comparison to Industry Rates

The comparison should be to five or more insurance companies representing at least 50% of the Nova Scotia insurance market. Do not include affiliated companies in the comparison. Percentage of market share is determined in accordance with the Superintendent of Insurance records. The Company must provide the rate for key rating profiles representing key target markets for the Company. The comparison must include the minimum rate, the maximum rate, the average (mean) and the median rate from the chosen peer companies. The rates for the peer companies must be those in effect at the time of the filing.

C-7.2 Comparison to Rating Bureau Rates

For clarification, the Board views IAO Actuarial Consulting Services Inc., who has its recommended rates approved by the Board, as a rating bureau.

The most appropriate comparison would show the expected overall average premium (or total premiums) on both the Company's current and proposed rates, as well as if rated under the chosen rating bureau criteria and rates, as approved by the Board. The details of the chosen rating bureau (i.e., who and what rate basis) must be included in the narrative with this section. Another approach would be to provide some rating examples or profiles of business typically written by the Company rated on both the current and proposed rates as well as those of the Rating Bureau.

C-7.3 Analysis of Industry Data

If the Company undertakes an analysis of industry data similar to how it would conduct an analysis of its own experience, the details must be included under **section C-3**. Any other analyses of industry data to support the chosen level of proposed rates should be included here. The narrative must explain the comparison and why the rates are appropriate in light of the analysis.

The Board has recently allowed, for companies with a small number of miscellaneous vehicles written, the use of a comparison of the average premium by coverage for the Company to that for the industry, as published by GISA. Any significant differences should be discussed.

Appendix B: Certificates of Officer and Actuary

Certificate of the Officer

I ______________________ ______________________

(Name of Officer) — *Office held: e.g. President, CEO, COO, CFO, Vice – President, Treasurer, Corporate Secretary, Chief Agent for Canada, or Designate)*

of ______________________ (Company)

(Official Name of Company as registered with the Superintendent of Insurance)

CERTIFY THAT:

1. This rate filing is in respect of the ______________________ category of automobile insurance and the following dependent categories:
(Please check all that apply)

- ☐ Not Applicable
- ☐ Personal Vehicles-Motorcycles
- ☐ Personal Vehicles-Trailers & Camper Units
- ☐ Personal Vehicles – Motorized Snow Vehicles
- ☐ Commercial Vehicles
- ☐ Public Vehicles-Taxis
- ☐ Personal Vehicles-Motorhomes
- ☐ Personal Vehicles-Off Road Vehicles (ATVs)
- ☐ Personal Vehicles-Historic Vehicles
- ☐ Public Vehicles-Other than Taxis & Limousines

to be effective as of: ______________ for new business
______________ for renewal business

2. I have knowledge of the matters that are the subject of this certificate.

3. The changes requested comply with the "***Rate Filing Requirements for Automobile Insurance – Section 155G Prior Approval***" published by the Board.

4. The information and each document contained in the application accompanying this certificate are complete and accurate in all material respects.

5. I have satisfied myself that the proposed rates are just and reasonable, do not impair the solvency of the Company, and are not excessive in relation to the financial circumstances of the Company and that the proposed risk classification system is reasonably predictive of risk and distinguishes fairly between the classes.

6. The proposed rates and rules comply with the *Insurance Act,* R.S., c. 231 and its associated Regulations.

7. If the filing is approved, all premiums (including all fees, discounts, surcharges and other components comprising such premiums) quoted and charged by the Company will, at all times and in all material respects, accurately reflect and conform to the filing as approved, whether such premiums are calculated manually or otherwise.

8. I have informed myself as to the Company's business systems and processes and confirm that any system or process changes that may be required to enable the Company to comply with paragraph 7 above will be adequately tested in advance and fully communicated to staff and intermediaries and implemented by the Company in a timely manner.

9. I confirm that any data changes that are ultimately approved in this application will be reviewed both internally and, if needed, with the General Insurance Statistical Agency and/or its data provider (currently IBC) to ensure that the required data can be properly and correctly delivered for inclusion in the Automobile Statistical Plan.

10. The following person is authorized by the Company as the contact person and to represent the Company, in all respects regarding this application:

(name)	(business address)
(title)	(telephone number)
(company)	(fax number)
	(e-mail address)

X ______________________ X ______________________

Signature of Officer Date and Location

Appendix B: Certificates of Officer and Actuary

Certificate of the Actuary

I, ____________________, a Fellow of the Canadian Institute of Actuaries, have been authorized to prepare a rate filing on behalf of

____

(Company) and hereby **CERTIFY THAT:**

1. This rate filing is in respect of the ____________________ category of automobile insurance and the following dependent categories: (Please check all that apply)

- ☐ Not Applicable
- ☐ Personal Vehicles-Motorcycles
- ☐ Personal Vehicles-Motorhomes
- ☐ Personal Vehicles-Trailers & Camper Units
- ☐ Personal Vehicles-Off Road Vehicles (ATVs)
- ☐ Personal Vehicles – Motorized Snow Vehicles
- ☐ Personal Vehicles-Historic Vehicles
- ☐ Commercial Vehicles
- ☐ Public Vehicles-Taxis
- ☐ Public Vehicles-Other than Taxis & Limousines

to be effective as of: ____________ for new business
____________ for renewal business

2. I have reviewed the data, assumptions and methodologies underlying this rate filing for reasonableness and consistency, and in my professional opinion:
   - the data is reliable and sufficient;
   - the assumptions selected are appropriate; and
   - the methods used are appropriate;

for the purpose of determining the actuarially indicated rates.

3. I have calculated the actuarially indicated rates in accordance with accepted actuarial practice.

4. In my professional opinion:

   (a) the actuarially indicated rates are just and reasonable in the circumstances; and
   (b) the actuarially indicated risk classification differentials are just and reasonable in the circumstances, are reasonably predictive of risk, and distinguish fairly between risks.

X ____________________ X ____________________

Signature of Actuary Date and Location