

# **Educational Note**

# Guidance for the 2016 Valuation of Insurance Contract Lizbilities of Life Insurers

Document 216089

This document was archived April 11, 2023



## **Educational Note**

Guidance for the 2016 Valuation of Insurance Contract Liabilities of Life Insurers

Committee on Life-Insurance Financial Reporting

#### August 2016

Document 216089

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Members should be familiar with educational notes. Educational notes describe but do not recommend practice in illustrative situations. They do not constitute standards of practice and are, therefore, not binding. They are, however, intended to illustrate the application (but not necessarily the only application) of the Standards of Practice, so there should be no conflict between them. They are intended to assist actuaries in applying standards of practice in respect of specific matters. Responsibility for the manner of application of standards of practice in specific circumstances remains that of the members.



# **MEMORANDUM**

**To:** Members in the life insurance practice area

**From:** Pierre Dionne, Chair

**Practice Council** 

Rebecca Rycroft, Chair

Committee on Life Insurance Financial Reporting

**Date:** August 31, 2016

Subject: Educational Note: Guidance for the 2016 Valuation of Insurance Contract

**Liabilities of Life Insurers** 

#### Introduction

The purpose of this educational note is to provide guidance to actuaries in several areas affecting the valuation of the 2016 year-end included contract liabilities of life insurers for Canadian generally accepted accounting provides (GAAP) purposes. In addition, the note provides an update on recently published experience studies and introductory information about potential changes in future financial in porting. The guidance in this educational note represents a majority view of the men here of the Committee on Life Insurance Financial Reporting (CLIFR) of approxitates rectice consistent with the Standards of Practice.

This year, a new section on capital-related topics has been added. This section is led by the Committee on Risk Management and Capital Requirements (CRMCR).

In accordance with the Canadian Institute of Actuaries' (CIA) Policy on Due Process for the Approval of Guidance Material Other than Standards of Practice and Research Documents, this educational note has been prepared by CLIFR, and has received final approval for distribution by the Practice Council on August 30, 2016.

As outlined in subsection 1220 of the Standards of Practice, "The <u>actuary</u> should be familiar with relevant Educational Notes and other designated educational material." That subsection explains further that a "practice that the Educational Notes describe for a situation is not necessarily the only accepted practice for that situation and is not necessarily <u>accepted actuarial practice</u> for a different situation." As well, "Educational Notes are intended to illustrate the application (but not necessarily the only application) of the standards, so there should be no conflict between them."

#### **Guidance to Members on Specific Situations**

From time to time, CIA members seek advice or guidance from CLIFR. Both the CIA and CLIFR strongly encourage such dialogue. CIA members would be assured that it is proper and appropriate for them to consult with the chair or vice-chair of CLIFR.

CIA members are reminded that responses provided by CLIFR are intended to assist them in interpreting the CIA Standards of Practice, educational notes, and Rules of Professional Conduct, in assessing the appropriateness of certain techniques or assumptions. A response from CLIFR does not constitute a formal opinion as to whether the work in question is in compliance with the CIA Standards of Practice. Guidance provided by CLIFR is not binding upon the member.

#### **Recent Guidance**

The following revisions to the Standards of Practice and related promulgations have been approved recently:

- <u>Final Standards Revisions to the General and Practice-Specific Syndards Consistency of Reporting and Conformance with International Standary of Actuarial Practice 1</u>
  (released December 9, 2014, and effective March 31, 2015);
- Exposure Draft for Revisions to the Practice-Specific Standards for Insurance (Part 2000) (August 25, 2016);
- Notice of Intent to Incorporate Principles of Sternational Standard of Actuarial Practice 4

   Actuarial Practice in Relation to IFRS X Incurance Sontracts into the Canadian Standards of Practice (June 22, 2015).

Recent CLIFR guidance includes the follow. • nateral:

- Research paper: <u>Development of New Nescribed Interest Rate Scenarios for CALM</u> Valuations (October 2014);
- Revised educational ofe: <u>nvestment Assumptions used in the Valuation of Life and Health Insurance Co. trace Littles</u> (reissued September 2015);
- Educational no supplement: <u>Development of the Equilibrium Risk-Free Market Curve</u> for the Base Scenaria, secember 2015); and
- Educational note upplement: <u>Development of the Equilibrium Risk-Free Market Curve for the Base Scenario: Excel File</u> (December 2015).

For your convenience all of these publications can be found on the CIA website under <a href="Publications">Publications</a>. A list of all the current educational notes and research papers can be found in appendix A.

In addition, CLIFR expects to publish the following guidance in the near future:

 Educational note supplement: Selective Lapsation for Renewable Term Insurance Products.

Some guidance provided last year is still appropriate, and has been duplicated in this educational note. The guidance is labelled as unchanged. Other guidance has been modified, either to reflect recent developments or to improve clarity and is labelled as modified.

The topics covered herein are

1. Experience Studies (modified)	
2. Life Insurance and Annuity Mortality (modified)	
3. Accident and Sickness Insurance Mortality and Morbidity (unchanged)	<del>.</del>
4. Economic Assumptions (modified)	Ç
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If you have any questions or comments regarding this educational note, please contact Rebecca Rycroft at <a href="mailto:rebecca.rycroft@oliverwyman.com">rebecca.rycroft@oliverwyman.com</a>.

PD, RR



#### 1. Experience Studies (modified)

The Research Committee has published the following studies:

Mortality study – <u>Canadian Standard Ordinary Life Experience 2013–2014 Using 86–92</u>
 Tables (June 2016).

Mortality study – <u>Canadian Standard Ordinary Life Experience 2013–2014 Using 97–04 Tables</u> (June 2016).

These reports submitted by the Individual Life Experience Subcommittee of the Canadian Institute of Actuaries (CIA) Research Committee detail the inter-company mortality experience for Canadian standard ordinary life insurance policies. They reflect the mortality experience of Canadian standard individual ordinary insurance issues between the 2013 and 2014 policy anniversaries. The <u>CIA 86–92</u> and <u>CIA 97–04</u> mortality tables were used to calculate the expected death claims for males and for smoker/non-smoker distinctions separately.

Morbidity study – <u>Canadian Individual Critical Illness Asurant.</u> <u>Warbidity Experience</u>
 Study Including Policy Anniversaries Between 2003 and 2011 Using Expected Incidence
 Rate Tables 2008 CANCI (December 2014).

This is the second report submitted by the individual Living Benefits Experience Subcommittee of the Research Committee letailing the intercompany morbidity experience for Canadian individual critical illness (CI) insurance policies. The Research Committee expects to publish an analytic to this study, based on policy anniversaries between 2005 and 2014, sometime in Q3 2016.

Mortality study – <u>Canadian adividua</u> <u>Annuitant Mortality Experience Policy Years 2002–2003 to 2011–2012</u> (February 2016)

This study updates the 2014–2002 through 2010–2011 study published in 2014; the information presented loes not require knowledge of the prior study. Six companies contributed to his study. Unlike the last study, the results do not include incurred but not reported (IBUP) factors. The study considers experience of Canadian individual annuities. Most outhe policies studied are in payout status but in some cases experience is included during the deferred period, provided the policy has no cash value and the policy cannot be changed.

- Mortality study <u>Canadian Insured Payout Mortality Table 2014</u> (February 2015).
  - The CIA has been collecting data on individual annuities on a seriatim basis since 1989, but no mortality table has been produced from the data. The paper sets out the construction of the first mortality table for Canadian payout annuities, CIP2014. It is based on data of the CIA individual annuitant mortality study for years of experience 2000–2011, but excluding data for policies with annual income of \$72,000 or more.
- Lapse study <u>Lapse Experience Study for 10-Year Term Insurance</u> (January 2014).
   This study of lapse experience under Canadian fully-guaranteed individual renewable and convertible 10-year term insurance (T10) policies was conducted by the Individual

Life Experience Subcommittee. This is the first study of T10 lapses conducted by the CIA. Ten of the largest writers of T10 insurance in Canada contributed. The study period runs from January 1, 2005 to December 31, 2010. Lapse rates vary by face amount as evidenced by the differences in lapse rates based on policy count and lapse rates based on amount of insurance. Consequently, most of the analysis in the report is presented on both bases.

- Lapse study <u>Lapse Experience under Term-to-100 Insurance Policies</u> (September 2015).
  - This is the sixth lapse experience study covering term-to-100 and similar insurance policies (collectively referred to as "T100"). This study covers calendar years 2005–2012; the previous study covered 1999–2004. Overall, compared to the prior study, lapse rates are lower than those observed before.
- Lapse study <u>Lapse Experience under Universal Life Level Cost of Insurance Policies</u> (September 2015).
  - This is the third lapse experience study covering universal hie level lost of insurance policies (referred to as "LCOI", "UL" is used to refer to all types of universal life policies). This study covers calendar years 2005–2012. Overall compared to the prior study, lapse rates are slightly lower than those observed before at a jost durations.
- Group health and dental insurance claims study <u>Extended Healthcare and Dental</u> Experience: A Report on a Post-employment Benefits Experience Study (March 2016).
  - This report covers the first-ever group hrath and dental insurance claims experience study in Canada. The primary focus one experience for employees aged 50+ to assist actuaries in valuing post-employment renefits.

The Research Committee plans to polish the following documents in 2017:

- Canadian Segregate Fund Policyholder Behaviour Company Practices Survey;
- Canadian Segregated Find Policyholder Behaviour Experience Study; and
- Canadian Segregate and Mortality Experience Study.

#### 2. Life Insurance and Arhuity Mortality (modified)

There are no changes to the guidance for the 2016 year-end valuation.

In 2014, a task force was created under the Member Services Council, with representatives from the life insurance, annuity, pension, and social security practices and an academic. The objective of the task force is to publish a research paper documenting the development of a best estimate mortality improvement rates table applicable to the Canadian general population, using Canadian population mortality data up to 2013, and to provide an opinion on a range of reasonable adjustments for the different subgroups.

In 2015, a new designated group of the Actuarial Standards Board (ASB) was created, with representatives from the task force. The mandate of this designated group is to

Review the appropriateness of the current subsection 2350 of the Standards of Practice
on the best estimate mortality improvement rates and the level of margins to apply to
the best estimate mortality improvement rates. All elements, including the best estimate
mortality improvement rates, the level and structure of the margins, and the approach
with the minimum and maximum will be reviewed and take into account the work of the
task force.

- Provide additional guidance on subsection 2350 of the Standards of Practice on the definition of "appropriate level of aggregation" with regards to the impact of inclusion of mortality improvement in insurance contract liabilities.
- Provide additional guidance on subsection 2350 of the Standards of Practice on the application of mortality improvement rates for the calculation of accident and sickness insurance liabilities.

The target timeline for the designated group is to complete its review in time for changes to be effective for the 2017 year-end valuation.

#### 3. Accident and Sickness Insurance Mortality and Morbidity (unchanged)

#### **Mortality Improvement – Active Lives**

The committee work to develop mortality improvement goldance did not consider accident and sickness insurance mortality improvement or morbidity. The did directly. The mortality improvement trends for accident and sickness insurance are expected to be the same for the active lives within accident and sickness insurance as for life insurance and annuities. It is recommended that the actuary would consider mortality improvements using the current prescribed mortality improvement rates for the current year-end valuation for accident and sickness active lives.

In order to determine the minimum variation assumption, the actuary would perform two valuations of active lives using the attention mortality improvement scenarios. The first scenario would be expected to apply in lituations where the reflection of mortality improvement decreases insurance contract liabilities, and the second where the effect is to increase insurance contract liabilities.

- 1. Mortality improvement would be projected for 25 years only from the valuation date using 50 percent of the base mortality improvement rates as described in the promulgation. After 25 years, no further mortality improvement would be reflected.
- 2. Mortality improvements would be projected for all future years using 150 percent of the base mortality improvement rates as described in the promulgation for 25 years and 100 percent of the base mortality improvement rates as described in the promulgation thereafter.

The prescribed mortality improvement rates would be the rates from the mortality improvement scenario producing the higher liability determined at an appropriate level of aggregation.

#### Mortality Improvement - Non-active Lives

The actuary may consider reflecting mortality improvement for non-active lives within accident and sickness insurance. However, given that the prescribed mortality improvement rates were developed using general population data, the minimum valuation assumption for mortality improvement rates does not apply to the valuation of non-active lives. Non-active lives are lives that are currently receiving benefits and the portion of lives that are expected to be in receipt of future benefits as measured in an active life reserve.

In 2014, CLIFR formed a subcommittee with a mandate to consider additional guidance relating to mortality improvement on non-active lives. The review was completed, and concluded that there is no reason to broadly support the application of mortality improvement to non-active lives. The actuary would consider mortality improvements for non-active lives only if the actuary has rationale that the population of non-active lives will exhibit mortality improvement.

The publicly available evidence does not clearly support the view that it are artality improvement applies to non-active lives. Two recent sources of publicly available data are documented herein:

- In 2013, the American Academy of Actuaries and St siets of Actuaries jointly sponsored a
  working group to recommend a new statutory variation backs for morbidity to the
  National Association of Insurance Commissioners. The working group had experience for
  the period 2000 to 2007 that did "not exk" bit any discernible mortality improvement"
  (Individual Disability Valuation Standard Report of the Joint American Academy of
  Actuaries/Society of Actuaries Individual Disability Tables Work Group, December 2013).
- The Office of the Chief Actuary period and a study of Canada Pension Plan disability beneficiaries; this study concluded that mortality improvement drove a decrease in mortality from the beginning of the study period until 1997. The study is silent on the applicability of mortality improvement after 1997; however, the exhibits with post-1997 data do not show nortality improvement. The report quotes other potential drivers of stable mortality experience since 1997 so it is not possible to conclude that mortality improvement it as ant. (Affice of the Chief Actuary, Actuarial Study No. 9: CPP Experience Study of Disability Beneficiaries, September 2011).

#### **Morbidity Trends**

In addition, the actuary may consider reflecting secular morbidity trends for accident and sickness insurance if the actuary has credible data or if the actuary has reliable benchmark data to use for purposes of projecting a morbidity trend. The data supporting longer-term trend assumptions would cover a relevant and sufficiently long period of experience to ascertain the secular trend and rule out shorter-term cyclical trends.

If a morbidity trend assumption is applied, then the actuary would apply a margin on the best estimate assumption consistent with subsection 2350 of the Standards of Practice. The actuary would consider whether the morbidity trend demonstrates unusually high uncertainty and would warrant selection of a margin above the high margin as noted in paragraph 2350.04 of the Standards of Practice. When assessing the appropriateness of aggregate provision for

adverse deviations (PfAD) levels, actuaries would consider the interrelationships of the assumptions and any potential undesirable compounding of provisions.

#### 4. Economic Assumptions (modified)

There are no changes to the guidance for the 2016 year-end valuation.

Revisions to subsections 2330 and 2340 of the Standards of Practice pertaining to investment assumptions were made in 2014. A CIA educational note: <a href="Investment Assumptions Used in the Valuation of Life and Health Insurance Contract Liabilities">Investment Assumptions Used in the Valuation of Life and Health Insurance Contract Liabilities</a> (September 2014) was issued to provide guidance and support to actuaries in the application of the revised Standards of Practice.

#### **Credit Spreads**

The educational note provides guidance on developing assumptions for credit spreads, including margins and limits. Two clarifications follow:

- The testing of the additional margin pertaining to the net redit stread limit (as defined in paragraph 2330.07.01) would be performed at the level a which the Canadian Asset Liability Method (CALM) liabilities are determined.
- Additional scenarios (as defined in paragraph 2330.3 The limited to varying risk-free interest rates and not credit spreads.

#### **Equilibrium Risk-Free Market Curve**

The educational note provides guidance on device sing an "equilibrium risk-free market curve" used in the base scenario that would extend or at least 40 years from the balance sheet date. During 2015, CLIFR reviewed the construction of this equilibrium risk-free market curve to address considerations that had arisen in the implementation of the new standards of practice.

As a result of this review, CLAR is used a revised educational note: <u>Investment Assumptions</u> <u>Used in the Valuation of Life and mean a Insurance Contract Liabilities</u> (September 2015). The 2015 version of the educational note remained unchanged from the 2014 publication, with the exception of the guidalice is wided for developing an equilibrium risk-free market curve extending beyond the current market curve and a clarification of the non-fixed income assets definition.

Further information on the development of the new guidance for extending the equilibrium risk-free market curve can be found in the CIA educational note supplement: <u>Development of the Equilibrium Risk-Free Market Curve for the Base Scenario</u> (December 2015). This educational note supplement includes a <u>spreadsheet</u> that illustrates the development of the base scenario.

#### Calibration of Interest Models/URR

The ASB is responsible for promulgating the calibration criteria and the ultimate reinvestment rates (URRs) from time to time. The ongoing low interest rate environment has prompted the ASB to monitor these developments closely. The ASB does not plan to promulgate new URRs for year-end 2016.

CLIFR formed a subcommittee in 2015 to support the development of URRs that would produce liabilities determined using a deterministic approach which fall within a reasonable range of the liabilities determined using a stochastic approach. CLIFR formed another subcommittee in 2016 to review and update the interest rate calibration criteria. The current calibration criteria are based on data up to the end of 2012.

#### **Negative Interest Rates**

There is an increased prevalence of negative interest rates in developed markets around the world. The actuary would consider the implications on the valuation of insurance contract liabilities when interest rates are negative.

CLIFR formed a new sub-committee in 2016 to investigate the implications of negative interest rates for the prescribed scenarios.

#### 5. International Financial Reporting Standards (modified)

In June 2013, the International Accounting Standards Board (IASE published the exposure draft Insurance Contracts for comments:

- IASB Insurance Contracts, exposure draft, June 26 (3; a).
- IASB Insurance Contracts, basis for conclusions xpc yre waft, June 2013.

Since June 2013, the IASB has been redeliberating and male additional decisions have been made. The final IFRS standard is targeted to be remased in the 2016 for implementation in 2020 or later. For the most current information please, see the <u>IASB website</u>.

The CIA Committee on International Insurance Accounting under the International Relations Council has the following mandate varingeal to international accounting and actuarial standards for the valuation of insurance anti-related products:

- Monitor development and ensure that news of relevant and material developments is dispersed appropriately within the CIA;
- Recommend where specific additional Canadian guidance may be helpful, and if so, assist in its development, and
- Where relevant and appropriate, provide input from a CIA perspective to the international governing bodies.

The ASB Designated Group on Insurance Contract Standards of Practice, published a <u>Notice of Intent to Incorporate Principles of International Standard of Actuarial Practice 4 - Actuarial Practice in Relation to IFRS X Insurance Contracts into the Canadian Standards of Practice, June 2015. The Canadian Accounting Standards Board has indicated its intention that, once adopted by the IASB, and subject to its due process, IFRS X will be adopted without modification for the valuation of insurance contracts in Canadian generally accepted accounting principles (GAAP) financial statements.</u>

#### 6. Segregated Funds (modified slightly)

#### **Calibration Criteria for Equity Return**

Calibration criteria for equity return assumptions for segregated fund liabilities were promulgated in 2012. A <u>research paper</u> that provided the rationale for these calibration criteria was published February 2012. The 2012 research paper presented the results of the calibration of left and right tail of equity returns, but deferred the calibration of the volatility of equity returns in the context of hedging to a later date.

CLIFR formed a subcommittee in 2016 to update the equity calibration criteria (to reflect more recent equity market data) and to provide a recommendation regarding the volatility of equity returns in the context of hedging. The subcommittee expects to release a paper in early 2017, and the promulgation of revised equity returns calibration criteria, including volatility of equity returns in the context of hedging, is targeted for later in 2017.

#### **Calibration of Investment Returns**

Calibration criteria for fixed-income returns were promulgated in 2014. As <u>esearch paper</u> that provided the rationale for these calibration criteria was published in April 2014. Calibration criteria are provided for the left tail of fixed-income returns of the order, fiver, 10-, and 20-year horizons as well as for the right tail at the one-year horizon, for the edifferent initial benchmark yields. Calibration criteria are provided for Canadian and U.S. broad-based fixed-income indices, and qualitative guidance is provided for other types of fixed income funds in the research paper.

The promulgation for the calibration criteria for quity returns provides a decision tree for the application of the criteria. Case 2 involves a model test, and applies to indices other than broad-based equity indices and small capit aization specks indices for which sufficient credible data are available. Broad-based real estate funds would fall under case 2, as the data available on real estate are deemed sufficient at the credible.

#### 7. Selective Lapsation (m. slifie

There are no changes the gulance for the 2016 year-end valuation.

The educational note <u>E. v. Ateo Mortality: Fully Underwritten Canadian Individual Life Insurance</u> <u>Policies</u> published in 200. discusses the impact of selective lapsation on mortality after term renewal. The principles and formulas discussed in this educational note are based on Valuation Technique Paper #2 (VTP #2) published in 1986.

CLIFR formed a subcommittee in 2014 to determine whether the 2002 educational note remains appropriate, taking into account the evolution of the market and products over the last 30 years. One of the important changes of the products available today compared to what was available in the past is the premium jump at renewal. VTP #2 was put in place at a time when the premium jump at renewal was about twice the initial premium. Today, the premium jumps are much higher. These premium jumps at renewal are driving lapse rates higher than 70 percent when considering lapses occurring in the first months after the renewal date.

The CLIFR subcommittee assessed the appropriateness of the VTP #2 method, considering the evolution of product design and the available industry experience. After the review, it was found

that the VTP #2 method remains theoretically sound. Nevertheless, CLIFR suggests that the following aspects require consideration:

 Deaths during grace period: When lapse rates are low, modelling deaths during the grace period has an insignificant impact on mortality deterioration. This may not be the case when lapse rates are very high.

- Skewness of lapses: There is skewness in lapses throughout a policy year, and particularly in the year following the renewal date where lapses tend to be concentrated near the beginning of the next policy year. If not modelled as such, the projected mortality may be underestimated in the year following the renewal date.
- Underlying lapses: Not reflecting the underlying lapses in the VTP #2 method has an
  insignificant impact on mortality deterioration when the lapse rates are low. This may
  not be the case when lapse rates are very high.

#### 8. Capital Section (new)

The Office of the Superintendent of Financial Institutions (OSFI) is used for Jublic consultation the draft guideline: Life Insurance Capital Adequacy Test (LICAT), along with the guideline's draft reporting forms in March 2016. The draft guideline also playides the framework for assessing the adequate margins for life insurers operating in Canada on a branch basis under the Life Insurance Margin Requirements and Adequacy of Assets in Canada Test (LIMAT). This revised capital adequacy framework is expected to replace the Life mum Continuing Capital and Surplus Requirements (MCCSR) and Test of Adequacy of Assets and Margins (TAAM) in 2018. Similarly, the Autorité des marchés financiers (AME) issues. Light directrice sur les exigences de suffisance de capital (ESCAP)" which is experted to replace the Capital Adequacy Guideline.

DCAT) for 2.16 reflects a projection of future capital Dynamic Capital Adequacy Testing adequacy starting from year-end 20.5. Give that the LICAT/LIMAT/ESCAP guideline is still under discussion and some t so planned before the guideline becomes final, ns an Appointed Actuaries are no sition to perform their 2016 DCAT projections on this ice would be to continue to perform the 2016 DCAT using the new basis. An appropriate pra MCCSR basis. It would ropriate for the Appointed Actuary to qualitatively describe the impact on the company's required and available capital to their board draft guideline's potent or chief agent either through routine updates or in the DCAT report.

Once the final LICAT/LIMAT/ESCAP guideline is available, the CRMCR will provide additional guidance to Appointed Actuaries for DCAT reporting, likely in early 2017. The CRMCR will be reviewing the DCAT standards of practice and the DCAT educational note for potential revisions during 2017.

Since July 2011, the Standards of Practice have been revised to permit the promulgation of selected assumptions from time to time by the ASB. These assumptions include mortality improvement assumptions (July 2011) and the maximum net credit spread, ultimate reinvestment rates, calibration criteria for stochastic risk-free interest rates (November 2014), and calibration criteria for equity returns for segregated funds liabilities. For DCAT, the actuary would consider changes to these promulgated assumptions.

#### **LICAT Designated Group and Sub-committee**

In 2016, a new designated group of the ASB was created to review the Standards of Practice for the preparation and filing of LICAT returns:

• Goal is to have outline of topics that would be covered and an indication of how the guidance is evolving in the fall.

The target timeline for the designated group is to complete their review in time for changes to be effective in 2018.



### Appendix A: CIA Guidance

Accession Number	Title	Publication Date
216087	Exposure Draft for Revisions to the Practice-Specific Standards for Insurance (Part 2000)	August 25, 2016
215111	Educational Note Supplement: <u>Development of the</u> <u>Equilibrium Risk-Free Market Curve for the Base Scenario</u>	December 17, 2015
215111T	Educational Note Supplement: <u>Development of the</u> <u>Equilibrium Risk-Free Market Curve for the Base Scenario:</u> <u>Excel File</u>	December 17, 2015
216081	Revised Draft Educational Note: <u>Use of Models</u>	July 26, 2016
216080	Second Exposure Draft for Standards of Practice: Use Models	July 26, 2016
215072	Revised Educational Note: <u>Investment Assumptions User in</u> the Valuation of Life and Health Insurance Contrary Liabilities	September 16, 2015
215049	Notice of Intent – Revisions to General Standards (32 t 1000)	June 22, 2015
215050	Notice of Intent to Incorporate Principles & International Standard of Actuarial Practice 4 - Actuarial Practice in Relation to IFRS X Insurance Contrains into the Canadian Standards of Practice	June 22, 2015
214128	Memorandum: Final Standards — evisions to the General and Practice-Specific Standards — Consistency of Reporting and Conformance with International Standard of Actuarial Practice 1	December 9, 2014
214129	Final Standards — evisions to the General and Practice— Specific Standards — Consistency of Reporting and Conformance with International Standard of Actuarial Practice 1	December 9, 2014
214109	Research Paper: <u>Development of New Prescribed Interest</u> Rate Scenarios for CALM Valuations	October 10, 2014
214096	Final Communication of a Promulgation of Calibration Criteria for Investment Returns Referenced in the Standards of Practice for the Valuation of Insurance Contract Liabilities:  Life and Health (Accident and Sickness) Insurance (Subsection 2360) (Fixed Income Returns)	August 21, 2014

Accession Number	Title	Publication Date
214046	Final Communication of Promulgations of the Maximum Net Credit Spread, Ultimate Reinvestment Rates, and Calibration Criteria for Stochastic Risk-Free Interest Rates in the Standards of Practice for the Valuation of Insurance Contract Liabilities: Life and Health (Accident and Sickness) Insurance (Subsection 2330 of the Final Standards for Revisions to the Standards of Practice)	May 15, 2014
214047	Final Standards – Revisions to Economic Reinvestment Assumptions within the Practice-Specific Standards on Insurance Contract Valuation: Life and Health (Accident and Sickness) Insurance (Section 2300 and Subsection 1110)	May 15, 2014
214048	Memorandum: Final Standards – Revisions to Economic Reinvestment Assumptions within the Practice-Specific Standards on Insurance Contract Valuation: Life and Healt. (Accident and Sickness) Insurance (Section 130t) and Subsection 1110)	May 15, 2014
214034	Research Paper: Calibration of Fixed Incom. R turns for Segregated Fund Liability	April 11, 2014
214008	Educational Note: <u>Dividend Leter ain tion for Participating</u> <u>Policies</u>	January 9, 2014
214006	Final Standards – Revocation of the Current Standards of Practice Entitled Resonance and Foundations – Dividend  Determination and Il Justration and Explanatory Notes in Amplification of Contain Amble Amb	January 9, 2014
213107	Research Paper – <u>Calibration of Stochastic Risk-Free Interest</u> <u>Rate Models for Use in CALM Valuation</u>	December 21, 2013
213077	Revised Educational Note – <u>Dynamic Capital Adequacy</u> <u>Testing</u>	November 13, 2013
213008	Final Standards for Practice-Specific Standards on Insurance Contract Valuation (Section 2300) to Narrow the Range of Practice on Certain Elements	February 12, 2013
213004	Final Standards – <u>Introduction of Standards Relating to</u> Appointed Actuary Opinions with Respect to Use of Internal Models to Determine Required Capital for Segregated Fund Guarantees	February 7, 2013

Accession Number	Title	Publication Date
212096	Educational Note: Future Income and Alternative Taxes	December 17, 2012
212054	Memorandum: Final Communication of a Promulgation of Calibration Criteria for Investment Returns Referenced in the Standards of Practice for the Valuation of Insurance Contract Liabilities: Life and Health (Accident and Sickness) Insurance (Subsection 2360)	July 3, 2012
212027	Educational Note: Reflection of Hedging in Segregated Fund Valuation	May 10, 2012
212012	Educational Note: <u>Valuation of Universal Life Insurance</u> <u>Contract Liabilities</u>	February 28, 2012
212004	Research Paper: Calibration of Equity Returns for Sevegated Fund Liabilities	February 3, 2012
211108	Memorandum: Final Standards of Practice – Fynam Capital Adequacy Testing – Section 2500 (with applicable)	November 11, 2011
211107	Final Standard of Practice: Revision of the Standard of Practice – Dynamic Capital Adequac Testin. — Section 2500	November 11, 2011
211091	Final Standards of Practice: Standards of Recognizing Events in Work (Slean Vel. ion)	September 26, 2011
211084	Final Standards of Practices Practice-Specific Standards for Insurance, Incorporation of Standard Wording for Fairness Opinions (subsection 2, 60)	September 7, 2011
211072	Final Communication of a Promulgation of Prescribed  Mortality Improvement Rates Referenced in the Standards of Practice in the Van ation of Insurance Contract Liabilities:  Life and Health (Accident and Sickness) Insurance (Subsection 2350)	July 12, 2011
211070	Final Standards of Practice: <u>Standards of Practice for the Valuation of Insurance Contract Liabilities: Life and Health (Accident and Sickness) Insurance (Subsection 2350) Relating to Mortality Improvement (clean version)</u>	July 12, 2011
211027	Educational Note: <u>Investment Return Assumptions for Non-</u> <u>Fixed Income Assets for Life Insurers</u>	March 1, 2011
211003	Final Communication of a Promulgation of Calibration Criteria for Investment Returns Referenced in the Standards of Practice for the Valuation of Policy Liabilities: Life and Health (Accident and Sickness) Insurance (Subsection 2360)	January 20, 2011

Accession Number	Title	Publication Date
210088	Research Paper: IFRS Disclosure Requirements for Life Insurers	December 13, 2010
210086	Educational Note: <u>Valuation of Gross Policy Liabilities and</u> <u>Reinsurance Recoverables</u>	December 1, 2010
210065	Research Paper: Mortality Improvement Research Paper	September 23, 2010
210053	Report: Report of the Task Force on Segregated Fund Liability and Capital Methodologies	August 11, 2010
210034	Educational Note: <u>Valuation of Group Life and Health Policy</u> <u>Liabilities</u>	June 4, 2010
209122	Educational Note: Calibration of Stochastic Interest Rate  Models	December 3, 2009
209121	Educational Note: <u>Currency Risk in the Valuation of Polity</u> <u>Liabilities for Life and Health Insurers</u>	December 2, 2009
209095	Research Paper: Considerations for the Development of a Pandemic Scenario	October 15, 2009
208004	Educational Note: Implications of Prop. sed Revisions to Income Tax Legislation (Nov 7, 200) Department of Finance Proposal)	January 23, 2008
207109	Educational Note: Cong derations of the Valuation of Segregated Fund Prod cts	November 22, 2007
207029	Educational Note: In plicate & of CICA Handbook Section  3855 - Financia Ungarrants on Future Income and  Alternative Taxes Update to Fall Letter	April 11, 2007
206147	Education   Note: Use of Actuarial Judgment in Setting Assumption and Margins for Adverse Deviations	November 30, 2006
206134	Educational Note: Best Estimate Assumptions for Expenses	November 8, 2006
206133	Educational Note: <u>Approximations to Canadian Asset Liability</u> <u>Method (CALM)</u>	November 8, 2006
206132	Educational Note: Margins for Adverse Deviations	November 8, 2006
206077	Educational Note: <u>CALM Implications of AcSB Section 3855</u> <u>Financial Instruments – Recognition and Measurement</u>	June 7, 2006
206049	Educational Note: Regulatory Capital Filing Certification	May 24, 2006
206048	Final Standards of Practice: Practice-Specific Standards for Insurers Subsection 2480 Regulatory Capital Filing Certification	May 24, 2006

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205122	Educational Note: <u>Applicability of Rules, Standards, and Other</u> <u>Guidance to CIA Members</u>	November 30, 2005
205111	Educational Note: <u>Valuation of Segregated Fund Investment</u> <u>Guarantees (Revised)</u>	October 26, 2005
203106	Educational Note: Selection of Interest Rate Models	December 2003
203083	Educational Note: <u>Aggregation and Allocation of Policy</u> <u>Liabilities</u>	September 15, 2003
202037	Educational Note: Expected Mortality: Fully Underwritten Canadian Individual Life Insurance Policies	July 8, 2002
202012	Final Report: CIA Task Force on Segregated Fund Investment Guarantees	March 6, 2002
20169	Research Paper: <u>Use of Stochastic Techniques to Value</u> <u>Actuarial Liabilities Under Canadian GAAP</u>	August 15, 2001