LIFE INSURANCE CAPITAL FRAMEWORK
STANDARD APPROACH

Table of Contents

Introduction

This paper outlines the main concepts underlying the potential new standard approach for the life insurance capital framework[1] at its current stage of development. It contains a summary of the rationale and basis for the methodologies tested in the 6th Quantitative Impact Study (QIS) of November 2014. The paper targets a wide audience of stakeholders.

The Office of the Superintendent of Financial Institutions (OSFI) and l'Autorité des marchés financiers (AMF) are conducting a review of their life insurance capital framework. The primary aim of the review is to consider developments in the areas of financial reporting, actuarial methodology, economic capital and financial theory, and to produce a revised capital guideline with an improved assessment of solvency risk. The revised approach should better align measures of risks with the economic reality faced by life insurers, thereby promoting appropriate risk management and business decisions.

This paper was prepared by the Standard Approach Advisory Group (SAAG), a Joint Committee of OSFI, AMF and Assuris. This revised standard approach, tested in QIS6, includes credit, market, insurance and operational risks. It includes credit for risk mitigation – reinsurance and fixed hedging, risk diversification – within risks and between risks and credit for discretionary features such as participating and adjustable products.

The available capital and segregated fund guarantee components of the new framework were not tested in QIS6 and are not in the scope of this paper.

Process

The QIS process was designed to assess the impact of potential regulatory capital changes that may be used in the future solvency and capital requirement test for life insurers.

The approaches described in this paper will be subject to further review, consultation and calibration. Industry stakeholder comments continue to provide valuable input to the development process.

[1] The approach builds on the MCCSR Advisory Committee memo to the Canadian Life Insurance Industry *Key Principles for the Future Direction of the Canadian Regulatory Capital Framework on Insurance*, dated May 2006. It is consistent with the *Canadian Vision for Life Insurer Solvency Assessment* (Vision Paper), dated November 2007 and the *Framework for a New Standard Approach to Setting Capital Requirements*, dated November 2008.

Approach and Methodology

Core Concepts

The MCCSR Advisory Committee memo *Key Principles for the Future Direction of the Canadian Regulatory Capital Framework on Insurance*, dated May 2006, outlined the foundation of the Canadian insurance regulatory capital framework. As the committee's work advanced toward a broader vision of the new framework, a set of core concepts was included in the vision paper. OSFI also published a framework paper[2] that shares its updated views, objectives and assessment of the evolving regulatory capital framework for life insurers. The following are five core concepts consistent with those papers and considered by the SAAG to guide its work in developing the revised life insurance capital framework.

1. The standard approach should contain methodologies (e.g., factors and cash flows) that can be objectively and consistently applied by all insurers.[3]
2. All relevant cash flows from on-balance sheet assets and liabilities, as well as from off-balance sheet activities (e.g., derivatives), should be considered.
3. There should be individual measures of required capital for insurance, credit, market, and operational risk, at a specified confidence level over a defined time horizon.[4]
4. Reinsurance, hedging and other risk mitigation strategies used by insurers should be reflected.
5. The methodology for aggregating required capital of individual risks should consider the dependencies and interactions within and between risks.

We believe that giving consideration to the above core concepts will result in a regulatory capital framework that strikes an appropriate balance between financial prudence and allowing life insurers to compete effectively and take reasonable risks.

Total Asset Requirement Approach

An important concept used for the development of the new framework is the measure of total assets required, rather than a measure of an add-on to financial reporting liability requirements. This was necessary in light of the uncertainty of future changes to International Financial Reporting Standard 4 *Insurance Contracts* phase II (IFRS 4/II).

---

2 *Life Insurance Regulatory Framework* in September 2012 (updated in November 2013).

3 Insurers will continue to be able to use an approved internal model (subject to revised criteria) for segregated fund guarantees. Internal models may be considered for other risks in the future.

4 The level of capital should provide that there are sufficient assets at the end of the defined time horizon to either run-off the policyholder and other remaining obligations or transfer the obligations to another insurer (including the winding-up or restructuring costs, where appropriate).

A total asset requirement (TAR) measures an insurer's ability to cover its obligations with a required level of confidence based on its total financial position. It requires the insurer to hold assets equal to the best estimate of its insurance obligations plus a solvency buffer.

TAR can be calculated independently of the financial reporting liability. The approach in QIS6 consists of a best estimate liability (BEL) and solvency buffer; both calculated using specified QIS discount rates. The BEL is calculated using cash flows consistent with the financial reporting liability cash flows, but without risk margins[5].

Solvency Buffer

The solvency buffer includes a measure of credit, market, insurance and operational risks that could have a negative financial impact on a life insurer.

> Overall, the solvency buffer is calibrated at the supervisory target level[6] to withstand adverse conditions at a degree of confidence of CTE (99)[7] over a one-year time horizon, combined with a terminal provision.
>
> The terminal provision should be determined objectively after, or in addition to, the shocks during the one-year horizon. It is expected to include margins for uncertainty, at a confidence level of CTE (60 to 80), appropriate for the lifetime of the policies.

The solvency buffer may provide that an insurer will have assets sufficient to either run-off or transfer[8] the business under prevailing conditions at the end of the one-year horizon.

The potential revised standard approach methodology currently calculates the solvency buffer using deterministic shocked cash flows, discounted at specified QIS discount rates.[9] Risks that are not explicitly measured by the revised standard approach (e.g., liquidity and credit concentration) will continue to be covered by other means, such as insurers' ORSA and the supervisory review process.

---

5 Financial reporting liability requirements include risk margins that are expected to represent the uncertainty in the amount and timing of the insurance contract cash flows; the margins usually cover uncertainty at a confidence level that is lower than what is required for regulatory capital purposes.

6 The target level of capital necessary for an insurer to cover the risks specified in the capital guidelines as well as to provide a margin for other risks. This is analogous to the current MCCSR 150% supervisory target level.

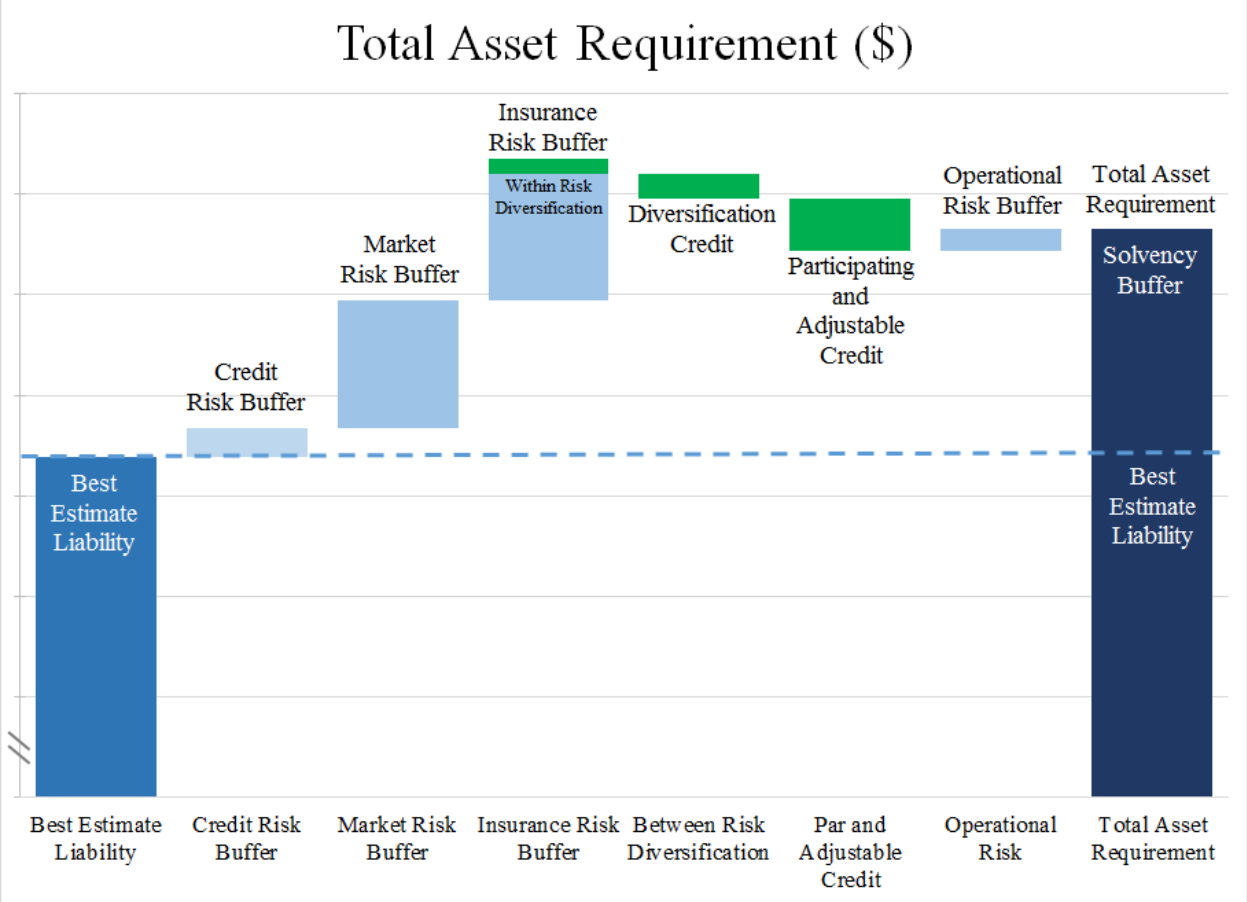
7 Conditional Tail Expectation (CTE) can be defined as the probability weighted loss above a certain probability level.

8 The concepts of run off (fulfillment value) and transfer (exit value) are used concomitantly in this paper. However, the two concepts could produce different values. The use of either one or the other may be further reviewed.

9 For practical reasons, simplified approaches based on factors or formulas are used for certain or parts of certain risks**.**

The potential revised standard approach tested in QIS6 also includes credit for diversification within and between risks and credit for discretionary risk sharing features in participating and adjustable business. Credit for risk mitigation, such as reinsurance and hedging, is reflected directly within each risk solvency buffer calculation. For inclusion, risk mitigation must be effective at the confidence level implied in the calculation of the solvency buffer.

The following graph illustrates the new life insurance standard approach QIS6 components and their aggregation within a total solvency buffer.[10]



[10] The graph is not to scale.

Framework Details

Solvency Measures

The MCCSR ratio is the current measure of regulatory capital for life insurers. It is based on the ratio of qualifying regulatory available capital to required capital. It may trigger supervisory intervention, based on capital adequacy, at the regulatory target level (150% MCCSR) and the supervisor taking control at the regulatory minimum level (120% MCCSR). The MCCSR ratio is a key measure, among other important considerations, in the regulatory assessment of insurer solvency. It is generally disclosed by life insurers.

Principles

Although specific solvency measures were not tested in QIS6, the study collected information for its development. The following key principles are being considered in the development of potential solvency measures:

- The solvency measure should give a timely identification of solvency concerns so that the regulator can intervene, when appropriate, to reduce the risk of loss for policyholders.
- The solvency measure should be risk sensitive but not unduly volatile.
- The impact on the solvency measure of changes in available capital and required capital should be, to a large extent, proportionate.
- Although its underlying component calculations may be complex, the solvency measure should be conceptually simple to explain.
- More than one solvency measure may be appropriate; these should be clearly defined.

Approach

Solvency measures generally involve a comparison of the available resources to the required resources. Several options are under consideration for solvency measures in the new framework. These may include capital ratios, total requirement ratios, and excess assets ratios.

Communication to stakeholders is important and any changes from the current MCCSR ratio will be clearly communicated.

Discount Rates

The discount rates constitute an important assumption to calculate the present value of cash flows in the determination of the BEL and the solvency buffer. At a later stage, consideration

will be given to using IFRS 4/II discount rates.[11] In the interim, specified discount rates are used in the QIS. While there are both advantages and disadvantages to the use of specified rates, it provides for increased consistency between insurers during the development stage.

The current design of the specified base QIS discount rates recognizes current market rates for asset and liability cash flows that can be matched, and historical average long-term rates for longer-duration cash flows. The discount rates are based on risk-free rates plus an illiquidity premium – the bottom-up approach under IFRS 4/II. Under this approach, the specific assets owned by an insurer have no impact on the discount rates. The Corporate A spread, as set out for each geography,[12] is used as a proxy for the illiquidity premium, not as a default risk premium.

Principles

The following **key principles** were considered in the development of specified discount rates used in QIS6:

- The discount rates should be practical, theoretically sound and consistent with potential future IFRS 4/II liability discount rates.
- The discount rates should give an objective estimate of fulfilment or exit value.
- Rates for periods where there is a deep and liquid market should be largely market consistent.
- There is an increased need for expert judgement to determine rates for periods where fewer transactions occur (e.g., between 20 and 30 years). This is a transition period which should be relatively smooth.
- Rates for periods where little or no transactions occur (e.g., beyond 30 years) should reflect long-term expected returns and not be inappropriately volatile.[13]

Approach

The Corporate A rates are based on fair value current yield curves that are a composite of A-rated curves, consisting of bonds denominated in local currency. For the rates after the yield curve ends, an approach based on average historical long term rates and spreads is used to keep the long term rates more stable.

[11] This issue will be reviewed as we gain more clarity on the future IFRS 4/II discount rates.

[12] Geography is specified and defined based on the volume/materiality of business reported by insurers and can be comprised of, for example, a specific country, group of countries or regions. The latest QIS included the following geographies: Canada, United States, United Kingdom, Europe – Other than United Kingdom, Japan and Other.

[13] Volatile long-term rates can produce inappropriate balance sheet and regulatory capital volatility.

The ultimate rate is defined as a forward reinvestment rate based on the CTE (50) average from 1919 to current, rounded to nearest five (5) basis points. There is also a linear reduction of the corporate spread from 100% of the corporate spread at year 20, to 80% of what was viewed as a geography-specific, long-term corporate spread at year 30. For example, a long-term spread of 80% x 1.25% = 1% is used for Canada.

The specified QIS discount rates are defined as:

- Current risk-free rates plus the spread for cash flows from years 0 to 20.
- Linearly interpolated based on forward reinvestment rates between the 20-year discount rate and the ultimate forward rate (UFR) and converted to spot rates for cash flows from years 20 to 30.
- UFR plus 80% of the long-term corporate spread and converted to spot rates for cash flows from beyond 30 years.

Credit Risk

Credit risk is defined as the risk of loss arising from the potential default of parties having a financial obligation to the insurer. The solvency buffer accounts for the risk of actual unexpected default as well the risk of an insurer incurring unexpected losses due to deterioration in an obligor's creditworthiness. The financial obligations to which the solvency buffer applies include loans, debt instruments, net reinsurance assets and receivables, derivatives and amounts due from policyholders, agents and brokers.

Approach

The QIS6 solvency buffer for credit risk on most fixed-income securities, such as bonds, asset-backed securities and preferred shares, is based on a modified Basel approach.[14] The QIS also includes a solvency buffer for reinsurance counterparty credit risk which is obtained by a factor based on an average of reinsurer credit ratings[15].

[14] It uses factors developed from best available information and is similar to the method currently used in the MCCSR. The new factors should give broadly similar results for the same asset classes for banks and insurers. For commercial mortgages, an approach based on experience consistent with historical data was used to develop the factor for the risk charge. For residential mortgages, current MCCSR factors were used.

[15] The bond factors for the applicable ratings are based on a modified Basel approach and a constant loss given default assumption applied to the reinsurance credit.

Market Risk

> Market risk is defined as the risk that changes in the financial markets will adversely affect the value of assets and liabilities.

This includes:

- **Interest rate risk** – the risk of economic loss resulting from market changes in interest rates. The most significant component is the risk of economic loss due to the effect of changes in future interest rates on the net present value of cash flows from interest-sensitive assets and interest-sensitive liabilities where the values do not move by a similar amount. Interest rate risk also includes the risk of increasing interest rates for assets backing available capital and surplus.
- **Equity market risk** – the risk of economic loss due to changes in the prices of equity shares. This includes both the systematic and specific components of common share price fluctuation.
- **Real estate risk** – the risk of economic loss due to changes in the amount and timing of lease cash flows and other changes that impact market prices of investments in real estate.
- **Currency risk** – the risk of economic loss due to changes in the amount and timing of cash flows arising from changes in currency rates of exchange where assets and liabilities are not matched in that currency.
- **Liability market options risk** – the risk of economic loss due to changes in the amount and timing of cash flows related to all market-related options and guarantees in the liabilities. These include guarantees of segregated fund performance and the exposure of derivatives to movements in the price of the underlying instrument or risk factor.

Approach

The QIS6 solvency buffer for market risk uses deterministic shock calculations for interest rate, equity, real estate and currency risks.[16]

For interest rate risk, each insurer projects future asset and liability cash flows consistent with its approach for asset and liability matching, including provisions for risk margins. The sensitivity of the present value of the asset and liability cash flows to interest rate changes is then shocked, under various interest rate assumptions. This includes both the provision over the one-year time horizon plus the terminal provision[17]. Interest-sensitive cash flows are adjusted to be consistent

[16] The new standard approach framework for segregated fund guarantee risk is in its initial stage of development and is not covered in this paper. Other liability market options risk elements may be considered for inclusion in the standard approach at a later time.

[17] Shock to the yield curve and to the UFR.

with each interest rate shock scenario. Equity values are not assumed to change when interest rates change.

The QIS solvency buffer for interest rate risk is calculated by geography and is the difference between the total net present value of the base scenario and the lowest total net present value of the shock scenarios. Business in Canada and the United States uses the scenario that produces the highest buffer on a combined basis for the two geographies, due to the high correlation between these economies.

The QIS solvency buffer for equity and real estate risk is calculated using simple deterministic shocks to the market value. Real estate market risk includes both the credit risk charge on the present value of contractual rental income plus a shock to the residual market value, after the present value of the future income stream is removed. Equity risk also includes mutual funds, segregated funds and index-linked risk pass-through products like index-linked universal life. The solvency buffer for index-linked risk pass-through products is a modified treatment of the current MCCSR, where the shock is reduced using the correlations of the underlying funds.

The QIS solvency buffer for currency risk is calculated based on an insurer's global net open position in each currency. The main difference from the current MCCSR is that surplus assets in foreign jurisdictions are no longer excluded from the calculation.

Insurance Risk

Insurance risk is defined as the risk of loss caused by obligation to pay out benefits and expenses in excess of what was expected. It includes unexpected losses associated with the many different risks covered by insurance and annuity policies, as well as related expenses. All applicable products are considered for each risk category.

The QIS solvency buffer for insurance risk includes the following categories:

- **Mortality risk on life insurance** – the risk associated with the increase in liability cash flows due to the incidence of death.
- **Longevity risk on annuities and death supported life insurance** – the risk associated with the increase in liability cash flows, due to people living longer.
- **Morbidity risk on disability, critical illness, long-term care and accident and sickness** – the risk associated with the increase in liability cash flows, due to the increased incidence of policyholder disability or health claims (including critical illness), as well as reduced recovery or termination rates.
- **Lapse risk or policyholder behaviour risk** – the risk associated with the increase in liability cash flows due to the incidence of (or lack of) policyholder lapses. Policyholder

lapsation includes options to fully or partially terminate an insurance contract, or decrease or suspend/resume insurance coverage.

- **Expense risk** (excluding operational and strategic risk) – the risk associated with the increase in expense liability cash flows due to the variation of the in-force policies, excess claims, lapses and surrenders, new business decrease or other circumstances that could have an impact on unit expenses.

Approach

The QIS solvency buffer for insurance risk is calculated using shocks at CTE (99) over a one-year horizon and, for the terminal provision, lifetime shocks that apply to the mortality, morbidity, lapse and the expense assumptions used for calculating best estimate insurance obligations. The terminal provision reflects the new adverse conditions and includes sufficient margins for future uncertainty for the run-off or transfer of the business. Insurance risk solvency buffers include the risk of misestimating the level and trend of the best estimate assumptions, as well as the shorter-term risks of volatility and catastrophe[18].

The QIS solvency buffer is calculated as the difference between the present value of the shocked cash flows and the present value of the best estimate cash flows.

The QIS solvency buffer for insurance risk includes diversification benefits within and across insurance risks. Diversification benefits within risks include the reduction of risk that occurs when risks are aggregated into larger pools, which is recognized for mortality and morbidity level and volatility risk. There is also a credit for mortality risk level and trend solvency buffers between life and death supported business, assuming a negative correlation between the two risks. Diversification benefits across risks (including asset risks) are included in the Aggregation and Diversification section of this paper.

The QIS solvency buffer for participating and adjustable products is calculated as though all business is non-participating and non-adjustable, with no reduction for discretionary features. A credit for participating and adjustable products is calculated in aggregate and separately from credit, market, insurance and operational risks and is discussed in the "Credit for Participating and Adjustable Products" section below.

[18] Level risk is the misestimation of the level of the best estimate assumptions; Trend risk is the misestimation of the future trend of the best estimate assumptions; Volatility (process) risk is due to randomness; Catastrophe risk is due to large-scale events

Operational Risk

> Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. It includes legal risk, which consists of, but is not limited to, exposure to fines, penalties, or punitive damages resulting from supervisory actions, as well as private settlements and excludes strategic and reputation risk.

An operational risk event (e.g., a systems error or breakdown in oversight) can cause severe losses and may lead to an insurer's insolvency or near insolvency. Traditional risk mitigation approaches (e.g., internal controls, auditing) cannot foresee or prevent low-frequency, high-severity events. They are designed to capture transactional errors, whereas operational risk in insurance entities originates mainly in other areas. In addition, transactional errors tend to be of a manageable loss size, whereas capital requirements should be designed to capture tail events that are essentially low frequency and high severity. It is therefore important to have an explicit operational risk buffer in the regulatory capital test to provide a buffer for potentially costly operational risk events.

Approach

There is not sufficient data available on the impact of past operational risk events of this nature. Therefore, the solvency buffer for operational risk is set at the target level of confidence largely by using expert judgment.

The QIS solvency buffer for operational risk is calculated by applying factors to risk proxies based on business volume and the calculated solvency buffer before operational risk**.** Different factors will be used for different lines of business.

Aggregation and Diversification

The QIS approach allows some credit for aggregation of risks and diversification benefits. It considers dependencies and recognizes when they are appropriate and measurable. Credit is allowed for diversification within risk categories. This takes into consideration the reduction of risk that occurs when risks are aggregated into larger pools. Credit is also allowed for diversification between risk categories, taking into consideration the behaviour of risks in extreme circumstances.

Diversification credit from the aggregation of risks is appropriate because:

- Life insurance policies are subject to many different risks (e.g., interest rates, mortality, longevity, lapses, expenses, etc.) and these risks are not perfectly correlated (e.g., mortality vs. lapses).

- When aggregating risks that are separately calculated at a target CTE level, the CTE level of the aggregate of the risks will be greater than the target CTE level.

Principles

The following **key principles** and general considerations were considered in the development of the QIS risk aggregation approach and the level of diversification credit:

- The method adopted should encourage sound risk management practices.
- The approach for determining the diversification benefit should be relatively simple and practical for a standard capital framework approach.
- The diversification benefits should be valid during prolonged periods of severe stress.
- The diversification benefits should be comparable for similar products across all financial institutions.
- Where specific risk factors or shocks have been developed based on diversified portfolios; it should be recognized that these already include some element of diversification.
- Each element of the diversification benefit, within and between risks, should be based on sound and generally accepted approaches and methods, supported by appropriate analysis that considers all available experience data and uses a high confidence level.
- The capital requirements should not be reduced below the highest single requirement for one risk or type of risk that could happen independently.

With the intent that the regulatory capital framework remains prudent, the overall impact of the diversification benefit is overlaid by prudent expert judgment.

Approach

The QIS insurance risk solvency buffer calculates the within-risk diversification directly in the insurance risk solvency buffer. It is calculated as follows:

- Directly in the mortality risk level and the volatility shocks and formulas, and in the morbidity level and volatility risk statistical fluctuation factors[19].
- As a credit between life- and death-supported level and trend risk, based on the assumed negative correlation between the two risks.

[19] Statistical fluctuation factors (SFFs) are used to reduce the morbidity solvency buffer by taking into account the size of the portfolio by type of product. As the portfolio size increases, the solvency buffer is reduced to reflect less variability of the claims.

- In the aggregation of level, trend, volatility and catastrophe risks, where the short-term risks (volatility and catastrophe) are assumed to be uncorrelated.

The QIS approach for between-risk diversification is to use a correlation matrix, based on a scale of factors determined using supervisory expert judgment. The correlation matrix includes seven[20] insurance risks as well as a combined asset risk.

The QIS diversification credit percentage is calculated as the difference between the sum of the individual solvency buffers for each risk and the solvency buffer calculated on an aggregated basis after diversification. There is a limit to the total between-risk diversification credit, using a gradual reduction formula for credits in excess of 5% up to a maximum diversification credit of 15%.

The QIS diversification credit percentage is applied to the solvency buffer (before credit for participating and adjustable products) reduced by 50% of the level and trend insurance risk solvency buffer[21].

Credit for Participating and Adjustable Products

Participating and adjustable products share risk with policyholders through discretionary features. The quantification of the benefits of this risk sharing/mitigation technique is reflected through a credit for participating and adjustable products[22]. This credit is applied when the insurer can demonstrate the risk pass-through by reducing dividends or other contractual adjustability.

Principles

The following **key principles** were considered in the development of the QIS credit for participating and adjustable products:

- The credit should reflect the nature and characteristics of the products and their adjustability features, including any potential or unclear limitations that may influence the insurer's ability to effectively adjust participating dividends or discretionary features (e.g., anti-selective lapsation, market pressures and other factors).
- The credit should be directly related to the amount of participating dividends or other discretionary features.

[20] The seven risks include: mortality, lapses for lapse sensitive products, lapses for lapse supported products, morbidity incidence, morbidity termination, longevity, expenses.

[21] When implemented, the new framework may provide that the solvency buffer be reduced by the amount of the IFRS 4/II insurance liability risk adjustment, or another amount, in lieu of the 50% of the level and trend insurance risk solvency buffer. Further review and analysis is required for its determination.

[22] The treatment of reinsurance contracts with profit sharing features in QIS is in accordance with the current MCCSR.

- Investment return assumptions used to develop participating base dividend scales should be consistent with financial reporting liability discount rates (best estimate and shocked).[23]
- The limit on the credit or the floor of the net solvency buffer should reflect the portion of the solvency buffer representing the risk that either cannot be transferred to the policyholder or can be transferred but not without potential difficulty[24].

Approach

The base dividend scale and the base value of the contractual adjustability features are the amounts expected to be used in the calculation of IFRS 4/II actuarial liabilities. Therefore, the QIS credit for participating and adjustable products is based on the value of the discretionary features, i.e., the level of dividends and contractual adjustability included in the best estimate scenario. The QIS approach requires that the BEL for participating and adjustable products (before the credit for participating and adjustable products) be calculated as if the products were non-participating and non-adjustable. Therefore, the base dividends and the value of contractual adjustability features are included in the BEL. The total QIS credit is limited based on the solvency buffer for participating products and the insurance risk solvency buffer for adjustable products.

Participating Products

The QIS credit for participating products is based on a percentage of the present value of base dividends, discounted at base scenario discount rates, subject to a limit and to a floor.

The methodology tested in QIS6 effectively results in a credit limited to the lower of the three following calculations:

1. 45-65% of the present value of base dividends, discounted at base scenario discount rates
2. 50% of the present value of base dividends, discounted at shocked scenario discount rates
3. 100% of interest rate risk solvency buffer, plus 50% of all other risk solvency buffers

The first two limits vary with the duration of the dividend cash flows. The longer the duration, the larger the impact of the shocked discount rates. The third limit ensures that the solvency buffer is not reduced below the floor of 50% of the non-interest rate risk solvency buffers and will apply to insurers in which the present value of dividends is much larger than the interest rate risk solvency buffer.

[23] At this time, these are assumed to be QIS specified base discount rates.
[24] For example, the credit for adjustable products should reflect the potential that regulatory approval may not be granted where it is a requirement prior to adjusting benefits or premiums.

The QIS approach is different from the current framework, where dividends are reflected directly in the CALM[25] valuation and where capital requirements use 50% of non-participating factors directly in each risk required capital calculation.

Adjustable Products

The QIS credit for adjustable products is based on the following percentages of the present value of contractual adjustability, discounted at base scenario discount rates:

- Products that require no regulatory approval - 60%
- Products that require regulatory approval - 40%

The QIS credit is also subject to a limit based on 50% of the adjustable products insurance risk solvency buffer. Due to insurer asset segmentation that is not specific to the adjustable products, the solvency buffer for asset risks is not considered when setting the limit.

Risk Mitigation

Risk mitigation accounts for situations where risk is reduced by the insurer. This includes both reinsurance and fixed hedging. The forms of risk mitigation that may be reflected in the standard approach may evolve over time.

Principles

The following key principles were considered in the development of the QIS approach for other risk mitigation:

- There should be a real reduction in risk.
- Contracts may be recognized if they are in force as of the valuation date.
- Risk mitigation techniques should consider the effect of other related risks, such as legal, regulatory and other operational risks.

Approach

Fixed-hedging contracts continue to be recognized as risk mitigants, with appropriate reductions in the QIS solvency buffer. This paper does not cover the standard approach on segregated fund guarantee and therefore does not include a discussion of credits in relation to the segregated fund guarantee risk solvency buffer.

[25] Canadian Asset Liability Method for valuing policy liabilities.

Reinsurance contracts will reduce the QIS solvency buffer for insurance risk in a similar manner to the existing relief under the current MCCSR. Reinsurance, however, is treated differently in QIS6 than in the current MCCSR with respect to the calculation of the operational risk and credit risk (reinsurance counterparty) solvency buffers. The QIS credit for reinsurance is calculated implicitly, using net cash flows in the solvency buffer calculations.