Advisory

Title	Alternative Method for Life Insurance Companies that Determine the Segregated Fund Guarantee Capital Requirement Using Prescribed Factors
Category	Capital Adequacy Requirements
Date	December 31, 2008
Sector	Life Insurance and Fraternal Companies

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Note:

Advisories describe how OSFI administers and interprets provisions of existing legislation, regulations or guidelines, or provide OSFI's position regarding certain policy issues. Advisories are not law; readers should refer to the relevant provisions of the legislation, regulation or guideline, including any amendments that came into effect subsequent to the Advisory's publication, when considering the relevancy of the Advisory.

This Advisory describes an alternative factor-based method that may be used to determine the segregated fund guarantee capital requirement for life insurance companies. This method is available to life insurance companies who currently determine the segregated fund guarantee capital requirement using the factors prescribed by OSFI.

This Advisory complements the following OSFI guidance:

- Guideline A: *Life Insurance Capital Adequacy Test* (LICAT)

Background

Sections 7.3 through 7.8 of the LICAT describe the method for determining the segregated fund guarantee capital requirement for companies using prescribed factors.

On October 28, 2008, OSFI announced changes to the segregated fund guarantee capital requirements for companies using an approved capital model. These changes provide companies with an approved capital model the option of using an alternative method to determine the segregated fund guarantee capital requirement effective year-end 2008.

This Advisory describes an alternative factor-based method ("Alternative Factor-Based Method") that is broadly consistent with the previously announced alternative method for companies with an approved internal model. Subject to the conditions outlined in this Advisory, companies that currently determine the segregated fund guarantee capital requirement using the factors prescribed by OSFI may elect to use the Alternative Factor-Based Method effective year- end 2008.

Description of the Alternative Factor-Based Method

Calculation of Total Requirement and Required Capital for Year-end 2008:

Under the Alternative Factor-Based Method, the total requirement for year-end 2008 is determined in the following way.

Segregated fund guarantee contracts are partitioned into three groups based on time-to-maturity and annuitant age characteristics as of year-end:

Group	Defining Characteristics
1	Contracts with time to maturity less than or equal to 1 year *or* annuitant age greater than or equal to 85
2	Contracts with time to maturity greater than 1 year *and* annuitant age less than 85 *but not including* contracts with time to maturity greater than 5 years and annuitant age less than 80 years
3	Contracts with time to maturity greater than 5 years *and* annuitant age less than 80 years

Contract-specific total requirements are then calculated according to the following rules:

Group	Total Requirement
1	CTE(95) + 50% × (CTE(95) − CTE(80))
2	CTE(95)
3	CTE(95) − 25% × (CTE(95) − CTE(80))

In this table, CTE(95) refers to the contract-specific total gross calculated requirement (TGCR) determined using the existing method and OSFI software tool referred to in chapter 7 of the LICAT and CTE(80) refers to the contract-specific actuarial liability calculated using the same OSFI software tool.

The total requirement for the portfolio is the sum of the contract-specific total requirements calculated in accordance with the described method.

Segregated fund guarantee required capital is then determined as 125% of the difference between the total requirement for the portfolio and the segregated fund guarantee liability for the portfolio. In this context, the segregated fund guarantee liability is the liability reported by the company on its financial statements, which is determined in accordance with actuarial Standards of Practice.

Calculation of Required Capital in Subsequent Quarters:

In subsequent quarters, required capital is determined using the steps that follow.

Step #1: Partition of contracts into three groups

Segregated fund guarantee contracts are partitioned into three groups based on time-to-maturity and annuitant age characteristics as of that quarter-end:

Group	Defining Characteristics
1	Contracts with time to maturity less than or equal to 1 year *or* annuitant age greater than or equal to 85
2	Contracts with time to maturity greater than 1 year *and* annuitant age less than 85 *not including* contracts with time to maturity greater than 5 years and annuitant age less than 80 years
3	Contracts with time to maturity greater than 5 years *and* annuitant age less than 80 years

Step #2: Allocation of the segregated fund guarantee liability to the three groups

The segregated fund guarantee liability for the portfolio as whole, which is determined in accordance with actuarial practice standards, is allocated to the three groups based on the CTE(80) requirements determined by the OSFI software tool. In particular, if L represents the segregated fund guarantee liability for the portfolio as a whole determined in accordance with actuarial practice standards, R_i represents the sum of the CTE(80) requirements for contracts in group i determined by the OSFI software tool and L is positive then the liability allocated to group i is

$$L_i = \alpha_i L$$

where

$$\alpha_i = \frac{\max(R_i, 0)}{\max(R_1, 0) + \max(R_2, 0) + \max(R_3, 0)}.$$

If $L \leq 0$ then the liability allocated to each group is 0.

Step #3: Calculation of required capital for contracts in group 1

Required capital for contracts in group 1 is determined as 125% of the difference between the total requirement for contracts in group 1 and L_1 , the liability allocated to group 1. The total requirement for contracts in group 1 is the sum of the contract-specific total requirements for group 1. The contract-specific total requirements for group 1 are determined as CTE(95) + 50% × (CTE(95) − CTE(80)), where the CTE(80) and CTE(95) values are calculated using the

OSFI software tool.

Step #4: Calculation of required capital for contracts in group 2

Required capital for contracts in group 2 is determined as 125% of the difference between the total requirement for contracts in group 2 and L_2 , the liability allocated to group 2. The total requirement for contracts in group 2 is the sum of the contract-specific total requirements for group 2. The contract-specific total requirements for group 2 are determined as CTE(95), where the CTE(95) values are calculated using the OSFI software tool.

Step #5: Calculation of required capital for contracts in group 3

Required capital for contracts in group 3 is determined as the sum of:

- 95% of the previous quarter-end required capital amount for contracts classified as group 3 as of at the previous quarter-end, and
- 5% of 125% of the excess of the current quarter CTE(95) amounts for group 3 over L_3

subject to

- a floor of 1.25 × [CTE(95) – 25% × (CTE(95) – CTE(80)) – L_3], and
- a cap of 1.25 × [CTE(95) − L_3].

Here CTE(80) and CTE(95) represent respectively the sums of the current quarter CTE(80) and CTE(95) amounts for group 3 determined using the OSFI software tool.

Step #6: Required capital for the portfolio as a whole

Required capital for the portfolio as a whole is the sum of the required capital amounts determined in Steps 3, 4 and 5.

Additional Information

The Alternative Factor-Based Method is optional. However, companies electing to use the Alternative Factor-Based Method in a particular quarter must continue to use the method in all subsequent quarters.

Companies wishing to use the Alternative Factor-Based Method must begin doing so no later than the first quarter of 2009. Companies implementing the Alternative Factor-Based Method after year-end 2008 should determine required capital as if the method had been adopted for year-end 2008. Companies implementing the Alternative Factor-Based Method after year-end 2008 should contact OSFI for further information on this.

Companies intending to use the Alternative Factor-Based Method must notify their Relationship Manager of their intent to do so and report the impact of the change at the time the Alternative Factor-Based Method is implemented.

Companies using the Alternative Factor-Based Method must disclose this in the Appointed Actuary's Report and provide information on the required capital amounts according to the defined time-to-maturity and annuitant age groups.

Companies using the Alternative Factor-Based Method are expected to perform on annual basis, or more frequently as necessary, forward projections of capital requirements, particularly when the time-to-maturity and annuitant age profiles of the company's contracts are such that a large number of contracts are expected to migrate from one of the defined groups to another.

The Alternative Factor-Based Method may only be elected by companies that currently determine the segregated fund guarantee capital requirement using prescribed factors. Companies that determine the segregated fund guarantee capital requirement using an approved capital model may elect to use the alternative method described in the Advisory: *Supplementary Information for Life Insurance Companies that Determine Segregated Fund Guarantee Capital Requirements Using an Approved Model – Revised Version* dated April 2009.