



Guidance Note

Subject: Capital Offset for Segregated Fund Hedging Programs (MCCSR)

Date: August 2001

Purpose

This note is intended to provide direction to life insurers wishing to obtain an MCCSR capital offset for hedging programs used in managing segregated funds market and insurance risks. Because this is an evolving area within the life insurance industry, OSFI expects that, as experience is gained, this guidance note will be revised.

Background

The capital requirements for segregated fund risks are specified in the MCCSR guideline. Currently, capital offsets are not provided for hedging programs for segregated fund risks. This guidance note outlines key criteria that must be met in order to obtain OSFI's approval for such offsets.

A strong risk management culture is a critical element in approving any hedging program for the purposes of a capital offset. Several of the requirements discussed later require an effective risk management culture. Examples include board and senior management involvement and approvals, independence of the risk management function, effective controls and validation processes, reporting that includes relevant management action plans, and appropriate skills to identify, monitor and manage the risks.

Federally Regulated Financial Institutions (FRFIs) that wish to obtain a capital offset for segregated fund hedging programs must submit an application to their Relationship Managers (RMs). Each application should address the requirements outlined in this note. In particular, each application should include copies of pertinent board approvals, documentation to support board approvals (see item 2), evidence of meeting operational requirements, sample reporting and a copy of the independent review and validation report (see item 6). All relevant documents should be available for onsite review. This transaction is subject to user pay.

REQUIREMENTS

The following are minimum expectations for the approval of hedging programs to obtain an MCCSR capital offset. In reviewing each application, consideration will be given to the FRFI's

business profile and control environment. The term “model” refers to a cash flow projection model that encompasses both investment returns and segregated fund liability characteristics. The model must be able to evaluate financial market options accurately within the context of real world-based investment return simulations pertinent to actuarial projections. An audit trail must be maintained for independent verification and control.

1. Board Approval of Hedging and Other Pertinent Policies

A strong risk management culture is a prerequisite for any hedging program approval. As such, the institution should have in place policies, processes, controls, management and board approvals that show that a strong risk management framework is in place and is working effectively.

The segregated fund risk mitigation program must be presented for review to both senior management and the board and must be explicitly approved by the board or an appropriate board committee.

As appropriate, the board or board committee must also approve policies that address derivatives, capacity limits, and operational limits.

2. Documentation

A comprehensive summary of all the principles, techniques and processes used to implement the model should be available for external audit, internal audit, operational and executive management and OSFI reviews. In addition, the documentation to support the board’s initial approval and OSFI’s review and approval should, at a minimum, include a description of the:

- rationale for use of hedging;
- hedging program, including any rebalancing criteria;
- products to which that program is to be applied;
- implementation plan for the program;
- derivative or risk mitigation products contemplated in the hedging program;
- measurement criteria for basis risk, liquidity risk, counter-party credit risk or any other material risks associated with the hedging program;
- model’s ability to evaluate financial market options (Q-measure) within a real world experience based valuation (P-measure);
- methodology, models and their limitations;
- use of hedging models within the day-to-day risk management process;
- review and approval process for the adoption of new models or modifications to existing hedging models;

- hedging model validation criteria;
- process and criteria for analysing hedge effectiveness and relationship to model validation criteria;
- frequency and types of model review;
- risk limits (corporate and trigger levels);
- escalation procedures for limit exceptions;
- stress testing and frequency of such tests;
- appropriateness of the chosen stress tests;
- reporting and monitoring requirements;
- systems used to support the monitoring and reporting;
- controls to ensure the integrity of data and results, including the peer review process;
- skills and expertise required of personnel to execute and monitor the hedging program; and
- actual CVs of individuals who develop, execute and manage the hedging program(s).

3. Operational Requirements

The program must be fully documented, implemented and proven to be effective for at least three months before OSFI will consider granting approval. During the initial implementation phase, increased monitoring and reporting of the program may be warranted.

4. Reporting

The results of the program must be reported to senior management at least monthly, with summaries of the relevant items to the board at least quarterly. More frequent reporting may be appropriate in certain circumstances. The reporting must define measurement criteria, quantify key risk exposures, analyse the hedge effectiveness and any residual risks, discuss financial implications, and specify appropriate action plans. Reporting must also include evidence of compliance with pertinent policies and limits.

Periodically, an analysis of the actual results of the hedging program versus the modelled outcomes should be conducted and reported.

5. Technical Analysis

The analysis underpinning the reporting must include a description of the stress testing undertaken (both quantitative and qualitative in nature and incorporating market risk, the liquidity aspects of market disturbances and liability characteristics), critical assumptions, demonstration of hedge effectiveness under routine and stressed conditions, and analysis of residual risks. Stress testing should be meaningful and should identify risks applicable to the hedging program and liability or product characteristics. Stress testing should be conducted at

least monthly, consistent with management reporting, and should incorporate deterministic adverse scenarios. It could also include stochastic scenarios. Stress testing scenarios must take into account all material risks relating to the hedging strategy. Examples include: illiquidity, where financial options required to rebalance the portfolio are not readily available, correlation changes between asset classes, and failure to execute the hedging program.

In addition, key model limitations should be reported. Circumstances under which the model does or does not work effectively should be documented. The modelling should follow the guidance outlined in the CIA Task Force on Segregated Funds Investment Guarantees August 2000 report. See section 2.3, “Modelling of Hedges”, of the report.

6. Independent Review and Validation

The hedging program and the models used to implement the strategy should be subject to an independent review by a qualified resource(s). Qualified individual(s) within the organization may conduct the review, provided that they were not involved with developing, implementing, or executing the hedging program or model. Qualified individuals are those that have the requisite analytical and business skills to understand and evaluate the hedging program. The hedging program, in this context, should include the models, assumptions, reporting, and overall risk management infrastructure. The review should, at a minimum, include evaluation of:

- data integrity and controls;
- model logic;
- existence and appropriateness of validation methodology for the models and assumptions;
- replication of modelling results;
- ability of models to accurately capture the hedging strategy;
- appropriateness of the stress testing program, including the use of stress testing results;
- sufficiency of documentation supporting the program (including models and assumptions); and
- robustness of the process for reviewing hedging results and relationship to model validation criteria.

The actuary of the company should also provide a supporting letter indicating the appropriateness of the models, hedging program and stress tests, and the reasonableness of the results including the appropriateness of capital offsets under stress scenarios. This letter is required at the time of application or re-application.

7. Modifications to Program

Any capital offset approvals are for the specific programs presented to OSFI. If the approved program is materially modified, the company must re-apply to OSFI and receive written approval

in order to continue to receive a capital offset. If the program is discontinued, the company must provide written notification to OSFI; the capital offset previously approved will be revoked.

Examples of material modifications include, but are not limited to a:

- change in board approval;
- change in model;
- change in the program; and
- change in the hedge effectiveness.

Any modified programs will need to satisfy the requirements of this guidance note. It will be sufficient, however, to model the results of the modified program for at least three months without actually implementing the program.

8. Maximum Capital Offset

Hedging strategies with respect to segregated funds market and insurance risks are relatively new and evolving. To allow for operational and execution risks in implementing such strategies successfully, the maximum offset will be limited to 50% of the reduction shown by the models. As the industry and OSFI gain confidence in implementing the strategies, this limitation will be reviewed.

The approach described below is applicable to capital offset under the current factor-based requirements.

The capital offset is determined by the use of a model –discussed previously – that accurately captures the hedging program in place and is approved by the board. This same model must be used to calculate the actuarial liability for these products. To determine the percentage reduction due to hedging, costs determined at the conditional tail expectation at 95% (CTE (95)) should be calculated on two bases: (1) with no hedging program in place and (2) with hedging. The underlying assumptions and scenarios must be the same for both calculations. The maximum allowable reduction will then be one-half of the difference between the two values, expressed as a percentage of the costs set at CTE (95) determined without hedging. This reduction is to be applied to the Net Requirements (NR) determined using factor tables as discussed in Chapter 9 of the MCCSR guideline. Therefore, the maximum allowable percentage reduction = $0.50 * ((1) - (2)) / (1)$ and the MCCSR NR with capital offset is equal to $NR * (1 - \text{maximum allowable percentage reduction})$.

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