AR-GUID-09/06-0010

For Discussion Purposes Only

FINANCIAL SERVICES COMMISSION
Discussion Paper
Draft Asset-Liability Management Regulations
April 2009

The Financial Services Commission ("FSC") is seeking to introduce Asset-Liability Management (ALM) Regulations requiring insurers to develop a program within which they can identify, quantify and manage the major risks associated with their various lines of business. The regulations would also form the basis upon which the FSC would assess the effectiveness of an insurer's risk management activities.

The contribution of key stakeholders is an integral part of this process. Therefore, we are soliciting comments on this discussion paper which will form the basis for drafting ALM Regulations.

Kindly review the discussion paper and forward your comments by **Friday, June 26, 2009** to:

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1. Introduction

1.1 Definition

Asset-liability management (ALM) is the practice of managing a business so that decisions and actions taken with respect to assets and liabilities are coordinated.

ALM is an ongoing process of formulating, implementing, monitoring, and revising strategies related to assets and liabilities to achieve an organization's financial objectives, given the organization's risk tolerances and other constraints.

1.2 Purpose

The purpose of this regulation is to require each insurer to establish and maintain an effective program of ALM. It describes the characteristics that such a program is expected to exhibit.

The FSC will use this regulation as the basis for assessing the characteristics and effectiveness of the ALM programs of insurers.

The FSC is responsible to: "promote the adoption of procedures designed to control and manage risk, for use by the management, boards of directors and trustees…"; and "Take such steps as are necessary to ensure that appropriate standards of conduct and performance are maintained…"[1]. ALM can make an important contribution to the control and management of risk by insurers in many ways, including the following:

(a) Promoting the identification and control of risks;
(b) Complementing other risk management activities, such as: underwriting risk management (product development, underwriting, claims, and reinsurance); credit risk management (investments); dynamic capital adequacy testing ("DCAT"); and enterprise risk management ("ERM"—of which ALM is a key component);
(c) Improving capital and liquidity management; and
(d) Enhancing internal and external communications.

[1] FSC Act, section 6.

2 ALM Framework

2.1 ALM Program

An insurer shall[2] develop and implement an effective program for monitoring and managing its asset-liability positions to ensure that its assets and investment activities are appropriate to its liability and risk profiles and its solvency position.

The ALM program of an insurer shall include the following:

(a) Formulation of objectives that balance risks and rewards and reflect the insurer's assessment of policyholders' expectations;
(b) Identification of all material risks arising from the insurer's assets and liabilities and their interaction;
(c) Analysis of such risks to assess the underlying causes of each risk, the relationships between various risks, and the relationships between risks and external factors;
(d) Quantification of the level of risk exposure using appropriate techniques and assessment of the expected rewards and costs associated with the risk exposure;
(e) Application of business and professional judgement to the results in the formulation of ALM strategies;
(f) Implementation of ALM strategies; and
(g) Monitoring, assessing, and reporting of risk exposures and revising ALM assumptions and strategies as appropriate.

The ALM program shall be appropriate to the insurer. The sophistication of the strategies, processes, and models used by an insurer shall be commensurate with the nature, scale, and complexity of its risk exposures.

The ALM program of an insurer shall cover all material risks requiring the coordination of assets and liabilities. Such risks typically include, in whole or in part, liquidity risk, market risk, and underwriting risk. They may include credit risk or operational risk, although these risks are typically covered by other risk management policies. The respective risk categories are defined below.

Credit risk: Credit risk is exposure to loss resulting from default by or change in the credit quality of issuers of securities, counterparties, and intermediaries to whom the company has an exposure.

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[2] Drafting note: "shall" has been used to denote a requirement, "should" to denote an expectation—about which there is some flexibility, and "may" to communicate examples of possibilities.

Liquidity risk: Liquidity risk is exposure to loss in the event that sufficient liquid assets will be unavailable, or will be available only at excessive cost, to meet the cash flow requirements of obligations when they are due.

Market risk: Market risk is exposure to loss from volatility or changes in the level of market prices of assets. It includes:

(a) interest rate risk: the risk of loss resulting from movements in interest rates and their impact on future cash flows;
(b) equity, real estate, and other asset value risks: the risk of loss resulting from movements of market values of equities, real estate, and other assets;
(c) currency risk: the risk of loss resulting from movements in exchange rates; and
(d) related credit risk: the counterparty credit risk arising from activities undertaken in connection with the management of exposure to market risk.

Operational risk: Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, or systems or from external events.

Underwriting risk: Underwriting risk is the specific insurance risk arising from the underwriting of insurance contracts. The risks within the underwriting risk category are associated with both the perils covered by the specific line of insurance and with the specific processes associated with the conduct of the insurance business. Underwriting risk includes claims risk and expense risk.

2.2 Economic Basis of the ALM Program

The ALM program of an insurer shall be based on economic value and shall consider the change in economic value that will arise from a range of plausible scenarios. Accounting and regulatory requirements and conventions may also be considered within an ALM program, representing additional constraints on the cash flows valued.

Economic value is the value of future cash flows derived in such a way as to be consistent with market prices or using market-consistent principles, methodologies, and parameters.

ALM takes into consideration the distribution of future asset and liability cash flows to determine the exposure to risk. Such cash flows and their values shall be derived by direct observation or by using models. The models used shall recognise changes in cash flows, and changes in the economic value of those cash flows, that will arise from a range of plausible scenarios. Such models shall be calibrated to appropriate observable market prices and shall take into account the specific variability in cash flows that is inherent in some products, such as exposure to catastrophe risk.

The ALM program of an insurer shall incorporate appropriate risk metrics to measure the exposure of economic value to risks. Examples of risk metrics that may be appropriate are liquidity ratios, duration, key rate duration, convexity, sensitivity analysis, Value at Risk (VaR), or Conditional Tail Expectation (CTE, also referred to as Tail VaR).

2.3 Responsibilities for the ALM Program

Senior management shall develop, and present to the board of directors for approval, an ALM policy that takes into account: asset-liability relationships, risk tolerance, long-term risk and return requirements, liquidity requirements, and solvency position. The insurer shall submit the ALM policy to the FSC within 30 days of obtaining approval from the board of directors.

The board of directors shall approve an ALM policy, taking account of the asset-liability relationships, risk tolerance, long-term risk and return requirements, liquidity requirements, and solvency position of the insurer.

Senior management shall implement the board-approved ALM policy.

The ALM program of an insurer shall be an integral part of its governance and business activities. ALM should be considered in the context of business activities such as planning, product development, pricing, and performance assessment. The information produced by ALM should be actionable, and appropriate action should be taken in response to such information.

Senior management and the board of directors shall assess the effectiveness of the ALM program annually or more frequently. The ALM policy and its implementation shall be revised, as appropriate, to ensure that the ALM program is effective and responds to changes in the business and the external environment. The insurer shall annually confirm to the FSC that it has assessed the effectiveness of its ALM program and submit a copy of the ALM policy to the FSC within 30 days, whenever it is revised.

3 ALM Policy

3.1 Content

The ALM policy of an insurer shall, at a minimum, include descriptions of the following:

(a) the objectives relevant in the context of ALM;
(b) the risk tolerance;
(c) the nature of the risks to be managed by the ALM program;

(d) the metrics used to measure the risks;
(e) the strategy for managing the risks; and
(f) the responsibilities of those involved in the implementation of ALM.

3.2 Risk Tolerance

An insurer shall establish and maintain a risk tolerance statement. The risk tolerance statement shall set out quantitative and qualitative tolerance levels overall, together with tolerance limits for each relevant and material category of risk, taking into account the relationships between these risk categories. The manner in which risk tolerance is expressed and reported shall be commensurate with the nature, scale, diversity, and complexity of the business.

The risk tolerance levels shall be consistent with the objectives, management philosophy, and solvency position of the insurer. They should be reflected in the ALM strategy, actively applied within the ALM program, and embedded in ongoing operations through risk management policies and procedures.

3.3 ALM Strategy

An insurer shall establish and maintain an ALM strategy. The ALM strategy shall:

(a) Describe the manner in which each category of risk that is material to the insurer will be measured and managed, taking account of the interactions between various risks;
(b) Include specific strategies in respect of blocks of business whose risk characteristics materially differ from one another, taking account of the interactions between various blocks of business;
(c) Take account of the risk tolerance, liquidity position, and solvency position of the insurer;
(d) Be consistent with and describe linkages to the other risk management policies of the insurer (such as investment and lending, underwriting, claims, reinsurance, and product development policies); and
(e) Describe the processes used to implement and monitor the results of the strategy.

4 Measurement and Management of Risks

4.1 Tools, Techniques, and Data

An insurer shall employ tools and techniques for the measurement and management of risks commensurate with the nature, scale, diversity, and complexity of its business. The ALM tools and techniques employed by an insurer shall be capable of producing a firm-wide measurement of risks.

An insurer shall develop and maintain sufficient, appropriate, and reliable data to enable the effective use of its ALM tools and techniques.

An insurer shall use appropriate metrics to measure exposure to relevant and material risks. The sophistication of the models shall be commensurate with the complexity of the portfolios of products and investments, in order to model the portfolios reliably.

The ALM tools and techniques employed by an insurer shall take into account risks posed by options embedded in both assets and insurance policies, and shall be used to assess the effects such embedded options might have throughout the life of the insurance policies.

Examples of tools and techniques that may be appropriate include:

(a) The measurement and matching of the duration and convexity of assets and liabilities;
(b) The measurement of VaR or CTE and management of assets and liabilities, perhaps through hedging strategies, to remain within risk limits;
(c) The calculation of liquidity ratios for various time horizons and management of assets to meet target ratios;
(d) The forecasting of liability cash flows in various time period "buckets" and management of assets to provide the required cash flows within each bucket;
(e) The use of foreign exchange derivatives to hedge currency risk; and
(f) The use of deterministic or stochastic models to forecast cash flows under various scenarios and alternative ALM strategies, to assess the level of risk and the viability of the alternative strategies.

4.2 Liquidity Management

An insurer shall prepare forecasts of cash flows from its assets and liabilities that include assumptions on the likely behavioural responses of key counterparties and policyholders to changes in conditions. The granularity and time horizon of such forecasts, and the frequency with which they are updated, shall be commensurate with the nature of the portfolios of assets and liabilities.

An insurer shall actively monitor its liquidity position and structure its assets so that it has sufficient cash and diversified marketable securities to meet its obligations as they fall due. An insurer shall maintain a cushion of liquid assets sufficient to deal with both routine fluctuations in the level and timing of obligations and reasonable adverse deviations in actual cash flows compared to the forecasts prepared by the insurer.

An insurer shall develop and maintain a contingency plan to deal with unexpected cash outflows or conditions that would impair its ability to liquidate assets at a

reasonable price. The contingency plan should be diversified and include legally enforceable commitments of liquidity support.

4.3 Longer-term Analyses

An insurer shall prepare analyses of relevant risks and the likely effectiveness of its ALM strategies in the management of such risks under a range of alternative scenarios. Such analyses shall include forecasts of the future financial condition of the insurer over a period of several years.

The sophistication and time horizon of such forecasts, and the frequency with which they are updated, shall be commensurate with the nature of the portfolios of assets and liabilities. The time horizons shall be not less than three years for general insurers and not less than five years for life insurers.

The analyses should be based on the business plans of the insurer. A wide range of alternative scenarios should be used, which reflect all reasonably foreseeable and relevant risks. The board of directors and senior management of an insurer should consider how they would respond under the various scenarios, focusing on those with the most damaging impact on the future financial condition.

5 Operational Aspects of ALM

5.1 Organization

An insurer shall be organized in a manner that will provide a close and continuing liaison between the different areas that need to be involved to maintain effective ALM.

The areas typically involved in an effective ALM program include investment, product design, pricing, valuation, marketing, information technology, finance, treasury, and risk management. The involvement of those from a wide range of organisational functions assists in providing a broad prospective to the ALM program and in the application of a variety of techniques.

The organisational structure depends on the nature, size and complexity of the insurer. It may include committees at the operational, senior management, and board levels. Such committees can assist in focusing attention on ALM and in coordinating the activities of those involved in its implementation.

The monitoring of risk and processes should be organisationally separate from the functions overseeing investments, pricing and management of in-force business.

The mandates, roles, and responsibilities of the positions and committees involved in the ALM program shall be clear, appropriate, and documented in writing. Such documentation may be included in the ALM policy.

5.2 Policies and Procedures

An insurer shall develop and maintain written policies and procedures for its ALM program. The scope and level of detail of such documentation shall be commensurate with the nature, size, and complexity of the insurer and the nature of its ALM program.

5.3 Controls and Reporting

An insurer shall develop and implement controls and reporting procedures for its ALM program that are appropriate for its business and the risks to which it is exposed.

An insurer shall monitor the observance of its controls closely and review their effectiveness regularly. Such monitoring shall include periodic review by persons independent of the ALM program, such as the internal audit function, group risk management, or an external consultant.

Reports prepared for operational management should be sufficiently detailed and frequent enough to enable them to effectively manage the risks on a day-to-day basis. Reports prepared for senior management should contain sufficient information to allow them to monitor adherence to the approved ALM policy on a regular basis, such as monthly or quarterly.

Reports should be prepared for senior management and the board of directors that are analytical in nature, allowing the users to draw independent conclusions.

The usefulness and timeliness of reporting, and the accuracy and integrity of reporting systems should be periodically verified.