Liability Driven investment by insurers: Topmost priority

Nikita Kumari
Dept. of commerce, Aligarh Muslim University

Abstract
Liability driven investment is the well developed approach in insurance industry. Every Insurer have to manage both their assets (investments) and liabilities in order to avoid a situation where asset values fall short of the liabilities which can be in severely lead to bankruptcy or insolvency of the insurer. The present paper attempt to highlight the importance of asset liability management in designing investment policy of insurance and various strategies covered under asset liability management framework. The study highlight that ALM is relevant to, critical for, the sound management of finance of insurers that invests to meet future cash flow needs and capital requirements.

Keywords: Investment policy, ALM, insurance.

Introduction
Insurance companies are prime financial intermediaries in both mature and emerging markets. In most advance market (with the exception of the United States and Canada), and in most parts of Asia and Europe, insurance companies are one of the prestigious institutional investors in terms of asset under management (AUM). Institutional investors, such as life insurance companies, face two contradict objectives. The first objective is to maximize the value of shareholders of the insurance company and the second objective is to protect the value of policy holders and to guarantee the future payout of policy obligations. (Plantinga & Huijgen. 2000) which creates a demand for effective asset liability management which would striking a perfect balance between two conflicting goals.

The financial services sector and insurance industry in particular, is not new to the concept of Asset-Liability Management. “For the life insurance industry, the groundbreaking idea in ALM was developed by Redington (1952)”. At the very foundation of ALM is the conception that there exists some set of liabilities that need to be funded by assets. Prakash Shimpi, (2003). According to (John D. Stowe and Collin J. Watson, 1985) a basic economic decision confronting a financial
intermediary is the mixture of assets to buy and liabilities to sell, a decision that reflects a complex set of economic and institutional considerations.” Therefore, a key driver of the asset portfolio of an insurer will be its liabilities profile, and the need to ensure that it holds sufficient assets of appropriate nature, term and liquidity to enable it to meet those liabilities as they become due.

In some other markets, Asset liability management can go by other names such as Liability Driven Investments, Stochastic Dynamic Financial Analysis, etc.

**Risk Covered Under ALM:**

**Market risk:**
For insurers, market risk is the extent to which an adverse movement in the value of the assets as a result of market fluctuations, such as changes in interest rates, foreign exchange rates, equity prices, real estate price movement etc., is not offset by a corresponding movement in the value of the liabilities. Market risk incorporates general market risk (on all investments) and specific market risk (on each investment).

**Underwriting Risk:**
Insurance contracts may offer various features of policyholder’s choices, such as settlement options, policy loan options, over-depositing options and surrender or renewal privileges. These embedded options provide policyholders inherent flexibility. However, if these are not managed properly, they could result in additional costs to the insurer over the life of the policy and rise liquidity cost.

**Liquidity risk:**
Liquidity risk is the inadequacy of sufficient liquid assets to support the liabilities, and to meet the cash flow requirements as and when they are due. This may force insurers to sell other assets at unfavourable prices.

**Techniques of ALM**

**Cash Flow Matching:**
Cash Flow Matching involves term wise matching of positive and negative cash flows to identify any potential points of a liquidity crisis

**Duration/ convexity:**
Duration is a measure for the sensitivity of the value of an asset to changes in interest rates. Convexity measures the rate of change of the duration with respect to the interest rate. In duration matching, duration and convexity measures are used to immunise a portfolio of assets and liabilities from fluctuations in interest rates.

**Scenario analysis:**
To manage uncertain future cash flows, insurers developed various scenario and addresses risk due to the specific scenarios considered.
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**Stress testing:**
Stress tests can be used to identify and quantify the overall impact of different stress scenarios on an insurer’s future financial position and help to maintain enough financial resources to manage them. The stresses may be financial, operational, legal; liquidity based or be related to any other risk that might have an adverse economic impact on insurers.

**Liquidity ratio:**
Insurers need to estimate the normal expected amount of liquidity that would be required to meet the demands of their underlying liability portfolios for various time horizons. They can then establish a ratio by taking this amount and adding a margin to cover unexpected liquidity requirements.

**ALM in India: Regulatory Perspective**
There is requirement to align ALM framework with principles as underlined in IRDA/ACTL/CIR/ALM/005/01/2012 dated 3rd January, 2012. Insurance Regulatory and Development Authority has required all the life insurers to provide the details of Asset and Liability Management activities undertaken by them in chapter-5, Risk management of Appointed Actuary’s Annual Report. Insurers shall have an ALM policy approved by the board of the insurer and shall be presented to the authority within 90 days from the date of this circular. Furthermore, Insurers have to deal with all the risks affecting future financial condition of the insurer. Life insurance companies are mandated to provide data with respect to assets and liabilities on a quarterly as well as yearly basis. IRDA also recommends Stress testing to be performed by insurers to determine the potential level of vulnerability under different scenarios. All life insurers shall submit the data with respect to asset and liabilities in the format, (Table- ALM- Quarterly) as per annexure- 1, on a quarterly basis within 45 days from the end of each quarter ending march 2012 onwards and Table- ALM- Yearly basis along with AAAR.

**Benefit of ALM:**

**Investment management:**
ALM help optimise investment return by properly matching liabilities, and reducing reinvestment risk or liquidity crisis. ex- if asset term less than liability term the insurer require to reinvested the asset again give rise to reinvestment risk or if asset term less than liability term insurer face liquidity crisis.

**Product planning and pricing:**
ALM facilitates insurance companies to categorise its product according to their risk profile and backed them by proper asset. Apart from this it facilitate pricing of all embedded options in insurance product by identify their risk exposure.
Risk management:
ALM taken into accounts all type of risk and identifies their potential impact on economic value. To reduce its strain on economic value, it set the limit to which the insurance company is willing to expose itself and apply proper technique to manage it.

Reduce strain on capital:
An effective ALM strategy weighs liability of insurers by assets or invests their assets to meet its future cash flow and capital requirements which reduce the burden on capital of insurers.

Conclusion
Asset/Liability Management (“ALM”) is generally viewed as a management tool to maximising investment returns while minimizing reinvestment risks. The basic investment principle to be followed here is that the insurer should try to maximize the return on investments by taking into account the liabilities profile of the insurer. There are several methods but the most common is duration method which is used to optimize the Asset and Liability matching. Along with this, stress testing is also taken as an important tool. IRDA has issued circulars from time to time to guide the insurers and made it a mandatory requirement to report its Assets and Liability cash flows on quarterly and yearly basis. Although the concept of ALM seems simple, its application can be difficult because in the real world there may not be the range of assets required to match future expected liability cash flows.

References


[8] IRDA/ACTL/CIR/ALM/005/01/2012