

ALM - Introduction

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Course Program

- Basic interest rate theory
- Interest rate risk management
- Stochastic term structure models
- Risk measurement
- Reinsurance and insurance-linked securities
- Mean-variance analysis for ALM

Stakeholders

- Shareholders
- Policyholders
- Creditors
- Management
- Reinsurers
- Investors in alternative risk capital
- Supervisors
- Rating agencies
- Tax authorities

Shareholders

- Have invested money in the company.
- Own the net assets of the company.
- Accumulate the after-tax profit or loss.
- Can normally diversify their shareholdings.
- Can “walk away” in case of bankruptcy.
- Can sometimes sell their shareholding.
- Want a competitive return on capital.

Policyholders

- Paid a premium to the company.
- Were promised compensation for losses.
- Cannot normally diversify their insurance cover.
- Cannot “walk away” in case of bankruptcy.
- Can normally not transfer their policy or claim.
- Are interested in a secure company.
- Want to pay a fair premium.

Creditors

- Delivered a service or product to the company and have been promised payment.
- Cannot normally transfer or sell their claim.
- May have an ongoing business relationship with the company.
- Are interested in a secure company.

Management and employees

- Operate the company.
- Invested their career in the company.
- Sometimes are also shareholders in the company.
- Usually cannot “diversify” their career.
- Can normally not “walk away” in case of bankruptcy.
- Focus most on growth and earnings (period accounts).
- Are the guardians of the balance sheet.

Reinsurers

- May have sold protection (non-proportional).
- May participate in the primary business (proportional).
- Cannot easily transfer an existing contract.
- Can refuse to renew a contract.
- Can ask for changed terms at renewal.
- Are interested in profitable underwriting.

Investors in alternative risk capital

- Accept risk from insurers, using financial instruments.
- Compete with (and partly replace) traditional reinsurance.
- Can move in and out of markets and positions at any time.
- Look for an expected profit commensurate with the risk.

Supervisors

- Monitor compliance with laws and regulations.
- Monitor companies' financial strength.
- Are seen as policyholders' guardian.
- Should they also work for a competitive marketplace?
- Are interested in prudent provisions and adequate capital.

Rating agencies

- Monitor companies financial strength.
- Focus on adequate capital.
- Focus on prudent provisions.
- Focus on sustainable strategy.
- Focus on profitable underwriting.
- Focus on risk control procedures.

Tax authorities

- Want to collect tax from the company.
- Want realistic provisions and capital.
- Are interested in a profitable business.

Objectives

- What does ALM stand for?
- Asset and Liability Matching?
- Asset and Liability Modelling?
- Asset and Liability Measurement?
- Asset and Liability Management?
- The answer is, **all of the above.**

Objectives

Definition of the Society of Actuaries ALM Principles Task Force:

- *Asset Liability Management is the ongoing process of formulating, implementing, monitoring, and revising strategies related to assets and liabilities to achieve financial objectives, for a given set of risk tolerances and constraints.*

Uses of ALM

- **Risk mitigation**: to keep risk exposure within specified limits, for given parameters,
- **Strategic**: to formulate asset/liability strategies to achieve financial objectives, subject to acceptable risk.

Focus of ALM:

- Economic: Present value of asset and liability cash flows;
- Market value: Market value of assets and liabilities;
- Accounting results: Book value of assets and liabilities;
- Regulatory: Control of regulatory key figures.
- Long term or short term.

Is all financial risk management ALM?

- Managing liability risk consists of finding offsetting assets;
- Managing asset risk consists of finding offsetting liabilities.
- Proper ALM consists of modelling and managing the **joint risk** of assets and liabilities.

Sources of risk

Managing each of these risks is a form of ALM:

- Interest rate risk - main focus of ALM
- Market risk (financial markets)
- Currency risk
- Liquidity risk (short-term debt obligations)
- Counterparty risk
- Insurance risk
- Operational risk

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