

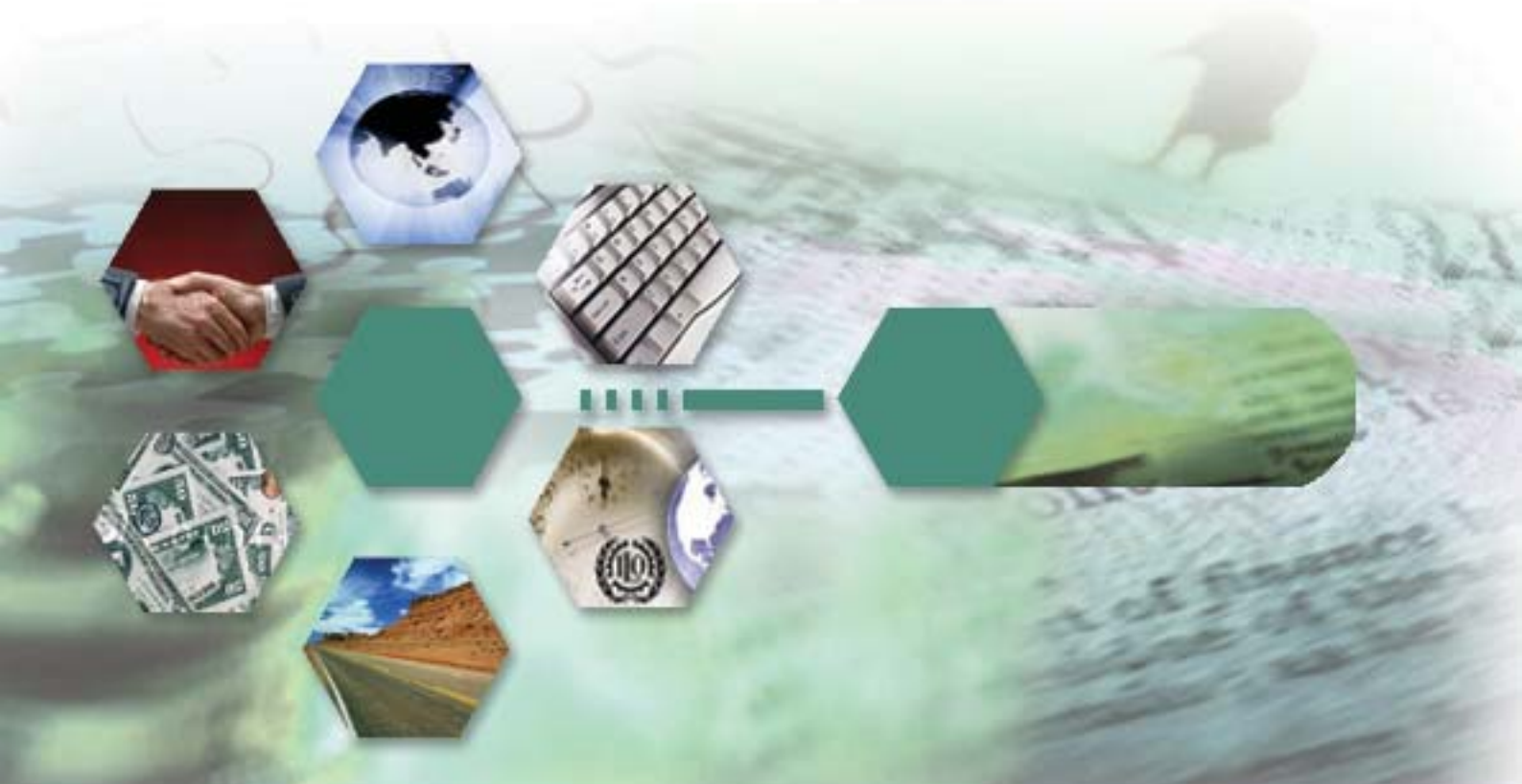
e-learning and reference solutions for the global finance professional

# Asset Liability Management for Insurance Companies

A comprehensive e-learning product covering Global Best Practices,  
Strategic, Operational and Analytical aspects

After completing this course, you will be able to:

- Benchmark your institution by examining ALM success factors
- Understand key performance indicators for ALM and Risk Management
- Gain practical insights into how leading institutions are utilizing ALM for value creation
- Examine how cash flows and risks of insurance products affect ALM
- Discuss the global best practices in ALM followed by insurance companies worldwide
- Examine how to provide optimal oversight of the Risk Management function
- Study how to enhance the effectiveness of ALM Committees

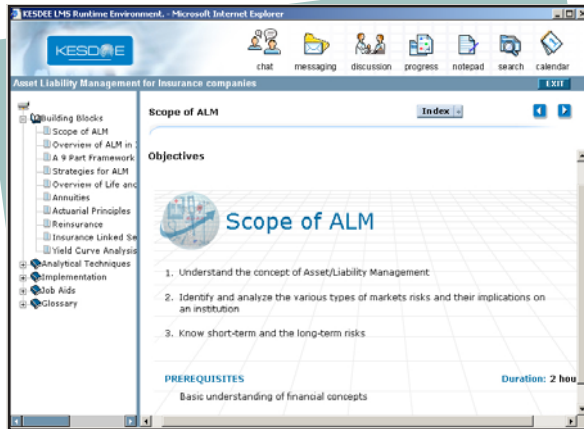


For more information, email us at [webmaster@icpas.org.sg](mailto:webmaster@icpas.org.sg)

# ASSET LIABILITY MANAGEMENT FOR INSURANCE COMPANIES

## Overview

The program has been designed to discuss concepts and case studies on Asset Liability Management for the insurance industry. The course discusses and reviews ALM concepts such as cash flows and risks of insurance products (assets and liabilities), applicable regulatory and capital guidelines, actual case studies and current trends and developments. The course has been designed to be conceptually sound and practical.



### **Course Level & Number of Courses**

Intermediate & Advanced Level  
Library of 29 Courses

### **Instructional Method**

Dynamic, Interactive e-learning

### **Recommended Background**

Familiarity with basic financial concepts

### **Highlights**

- The Securitization Process
- Cash Flow Modeling
- Credit Analysis and Structuring in Mortgage-backed Securities
- Traditional and Emerging Market CDOs
- Case Studies from different countries
- Global Best Practices

For more information, email us at:

**e-cpe@saa.org.sg**

# ASSET LIABILITY MANAGEMENT FOR INSURANCE COMPANIES

## Library of 29 Courses

### 1. Scope of ALM

- Objectives
- Introduction
- Interest Rate Risk
- Foreign Exchange Risk
- Commodity Risk
- Stock Market Risk
- Liquidity Risk
- Credit Risk
- Short-term Vs. Long-term

### 2. Overview of ALM in Insurance Companies

- Objective
- Introduction
- Applications
- Benefits and Limitations
- Types of Risks
- Managing Risks

### 3. A 9 part Framework of ALM

- Objectives
- Introduction
- Strategic Framework
- Organizational Framework
- Operational Framework
- Analytical Framework
- Technology Framework
- Information Reporting Framework
- Performance Measurement Framework
- Regulatory Compliance Framework
- Control Framework

# ASSET LIABILITY MANAGEMENT FOR INSURANCE COMPANIES

## Library of 29 Courses

### 4. Strategies for ALM

- Objectives
- Introduction
- On Vs. Off Balance Sheet Strategy

### 5. Overview of Life and Property and Casualty Industry

- Objectives
- Introduction
- Players
- Life Insurance Products
- Property and Casualty Insurance Products
- Global Landscape and Future Trends

### 6. Annuities

- Objectives
- Introduction to Annuities
- Annuity Characteristics
- Types of Annuities
- Annuity Calculations
- Equity Indexed Annuities (EIA)
- Indexing Methodologies of EIA

# ASSET LIABILITY MANAGEMENT FOR INSURANCE COMPANIES

## Library of 29 Courses

### 7. Actuarial Principles

- Objectives
- Introduction
- Statistical Framework
- Economic and Behavioral Framework
- Actuarial Modeling Principles
- Principles Underlying Financial Security Systems

### 8. Reinsurance

- Objectives
- Introduction
- Types and Methods of Reinsurance I
- Types and Methods of Reinsurance II
- Alternative Risk Transfer
- Functions of Reinsurance

### 9. Insurance- linked Securitization

- Objectives
- Introduction to Insurance-linked Securitization
- Instruments for Insurance-linked Securitization
- Insurance Risk Structures
- Analyzing Insurance- linked Securitization

# ASSET LIABILITY MANAGEMENT FOR INSURANCE COMPANIES

## Library of 29 Courses

### 10. Yield Curve Analysis

- Objectives
- Introduction to Yield Curve Analysis
- Types of Yield Curves
- Analyzing Yield Curve
- Bond Arbitrage Strategies
- Application of Yield Curve

### 11. Interest Rate Gap I

- Objectives
- Introduction to Gap
- Gap Report
- Considerations in Slotting of Different Items

### 12. Interest Rate Gap II

- Objectives
- Income Impact
- Gap Limits
- Restructuring Strategies
- Strengths and Limitations

### 13. Simulation and Scenario Analysis –I

- Objectives
- Introduction to Simulation
- Measuring Risk Positions
- Scenarios and Results
- Simulation Modeling
- Backtesting

# ASSET LIABILITY MANAGEMENT FOR INSURANCE COMPANIES

## Library of 29 Courses

### 14. Simulation and Scenario Analysis –II

- Objectives
- Business Strategies
- Monte Carlo Simulation
- Software Packages
- Simulation in Insurance
- Dynamic Financial Analysis
- Case Study
- Strengths and Limitations

### 15 . Duration I

- Objectives
- Introduction
- Duration Vs. Yield
- Duration Vs. Maturity
- Duration Vs. Coupon

### 16. Duration II

- Objectives
- Duration of a Perpetual Bond
- Duration of a Bond with Embedded Options
- Duration of Portfolio
- Duration of Off-Balance Sheet Items
- Approximation in Duration
- Gap Vs. Duration
- Payment Frequency
- Strategies for Risk Management

# ASSET LIABILITY MANAGEMENT FOR INSURANCE COMPANIES

## Library of 29 Courses

### 17. Duration III

- Objectives
- Duration of Equity and Leverages
- Examples
- Duration of Complex Items
- Leveraged Inverse Floaters
- Zero Coupon Yield Curve
- Comparison

### 18. Convexity

- Objectives
- Introduction
- Definition of Convexity
- Convexity Calculation
- Convexity and Yield
- Convexity, Maturity, Coupon and Price Change
- Convexity of a Portfolio
- Positive and Negative Convexity

### 19. Basis Point Value

- Objectives
- Introduction
- Calculation of Basis Point Value for On-Balance Sheet Items
- Calculation of Basis Point Value for Off-Balance Sheet Items
- Basis Point Value of a Portfolio

# ASSET LIABILITY MANAGEMENT FOR INSURANCE COMPANIES

## Library of 29 Courses

### 20. Value at Risk – I

- Objectives
- Introduction
- Measures of Risk Exposure
- Computation of VaR
- Strengths and Limitations of VaR

### 21. Value at Risk – II

- Objectives
- VaR for Foreign Currency Spot and Options
- VaR for Foreign Exchange Forward
- VaR for Common Shares
- VaR for Fixed Income Securities
- VaR of a Portfolio
- Applications of VaR

### 22. Application of Analytical Techniques

- Objectives
- Introduction
- Concepts and Assumptions
- Applications
- Practices

# ASSET LIABILITY MANAGEMENT FOR INSURANCE COMPANIES

## Library of 29 Courses

### 23. AL Organization

- Objectives
- Introduction
- Composition of ALCO
- Scope of ALCO
- Properties

### 24. ALCO Meetings

- Objectives
- Introduction
- ALCO Meetings
- ALCO Data Requirements

### 25. ALM Policies and Procedures

- Objectives
- Introduction
- Policy Statement
- Procedure Manual
- ALCO Reports

### 26. Audit of ALM

- Objectives
- Introduction
- Overall Approach
- Audit

# ASSET LIABILITY MANAGEMENT FOR INSURANCE COMPANIES

## Library of 29 Courses

### 27. Regulations in Insurance Industry

- Objectives
- Introduction to Insurance Regulation
- Regulatory Measures
- Capital Regulation
- Future Advances

### 28. Software Applications

- Objectives
- Introduction
- Prophet
- AVE
- Solcorp/Ingenium
- GGY and AXIS
- The Yield Book Inc
- PTS Solution
- Tillinghast/Moses

### 29. Case Study – Confederation Life Insurance

- Introduction
- Lessons to be Learnt

# ASSET LIABILITY MANAGEMENT FOR INSURANCE COMPANIES

## Set of 6 interactive Job Aids

- Measurement Tools
- Disclosures
- Regulations
- Global Best Practices
- Policy Templates
- Crossword

## Calculators in Asset Liability Management for Insurance Companies

1. Confidence Level for a given Standard Deviation
2. Standard Deviation for a given Confidence Level
3. Duration
4. Duration of a Portfolio
5. Duration using Zero Coupon Yield Curve
6. Duration of Amortizing Assets
7. Duration of uneven cash flows
8. Duration of Equity
9. Convexity
10. Convexity of uneven cash flow
11. BPV of a Bond
12. BPV of a Forward Rate Agreement (FRA)
13. BPV of a Portfolio
14. BPV of a Coupon Paying Bond
15. Value at Risk - Variance Covariance Method
16. Value at Risk for Different Weights
17. Gap Income Impact
18. Forward Rate Calculator
19. Zero Coupon Yield Calculator
20. VaR for required period and confidence level