# **HKICPA** Tutorial Overviews

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# **Asset Classes & Investing**

#### **Tutorial Description**

Objectives

On completion of this tutorial, you will be able to:

- Identify the main characteristics of asset classes and the importance of diversifying a portfolio among these different classes
- Recognize the role modern portfolio theory plays in asset class diversification

#### **Tutorial Overview**

This tutorial examines the importance of diversifying across asset classes in order to achieve an optimal risk/return trade-off as proposed by modern portfolio theory.

Prerequisite Knowledge Asset Classes – Primer

Tutorial Level: Introductory Tutorial Duration: 50 minutes

#### **Tutorial Outline**

Topic 1: Asset Class Exposure & Allocation

- Gaining Exposure to Asset Classes
- Asset Classes & Diversification
- Asset Allocation
- Asset Allocation: Weaknesses

Topic 2: Asset Allocation & Modern Portfolio Theory

- Modern Portfolio Theory (MPT)
- MPT: The Efficient Frontier
- Key Inputs
- Expected Return
- Expected Return: Market Risk Factors
- Risk
- Risk: Standard Deviation
- Risk: Sharpe Ratio
- Scenario: Sharpe Ratio
- Correlation
- The Problem of History
- Survivorship Bias



# Asset Classes – Types

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the main features of equities and their subclasses
- List the key types and issuers of fixed income securities
- Recognize the main types of cash and cash equivalents
- · Identify the ways investors can gain exposure to the real estate asset class
- List the main types of alternative asset and recognize how some assets can be classified as alternative or mainstream

#### **Tutorial Overview**

This tutorial examines the main asset classes that are used to diversify an investment portfolio, including equities, fixed income, money market securities, real estate, and alternative assets.

Prerequisite Knowledge Asset Classes – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

#### **Tutorial Outline**

Topic 1: Equities

- What Are Equities?
- Equity Subclasses
- Equity Size & Value
- Private Equity (PE)/Venture Capital (VC)
- Equity Returns & Volatility
- Equity Risk Premium (ERP)
- Forecasting ERP
- Forecasting ERP: Issues

#### Topic 2: Fixed Income

- What Is Fixed Income?
- Bond Issuers
- Bond Issuers: Sectors
- Bond Issuers: Private Issuance
- Features of Bonds
- Loans
- Bond Risk Premium (BRP)
- Bond Risk Premium (BRP): Calculation
- Credit Risk Premium (CRP)

Topic 3: Cash & Cash Alternatives

- Overview of Cash & Cash Alternatives
- Types of Cash Investment

Topic 4: Real Estate

- Overview of Real Estate
- Real Estate Investment

Topic 5: Alternative Assets

- Overview of Alternative Assets
- Types of Alternative Asset
- Alternative vs Mainstream Assets



# **Preparing & Controlling a Budget**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Explain how to prepare a budget
- Set up a control system for a budget

#### **Tutorial Overview**

Budgeting is potentially a manager's most valuable planning and management tool - but only if budgets are carefully planned and monitored. Depending on the size of the organization, preparing a budget can be a very complex process. This tutorial focuses on important aspects of budgeting - preparation and control.

Prerequisite Knowledge Budgeting - An Introduction

Tutorial Level: Introductory Tutorial Duration: 90 mins

#### **Tutorial Outline**

Topic 1: Preparing a Budget

- Revenue
  - Sales
    - Cost of Sales
  - Gross Profit
- Operating Expenses
- Operating Profit

Topic 2: Controlling a Budget

- 1.Calculate a monthly budget
- 2. Input monthly actuals
- 3. Calculate variances
- 4. Flex the budget
- 5. Calculate flexed variances
- 6. Analyze the variances
- 7. Take corrective action



# **Working Capital Management**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Explain the importance of working capital management
- Calculate a firm's working investment need
- List the causes and risks of overtrading

#### **Tutorial Overview**

Most decisions the financial manager will make are short-term in nature; for example, organizing a 90day bank loan to plug a financing gap. Though easier than long-term financial planning, short-term decisions are no less important. This tutorial focuses on the types of short-term assets and liabilities owned by a company and how the company can most efficiently use them. It also illustrates how shortterm funding requirements can be met.

Prerequisite Knowledge Corporate Finance - An Introduction

Tutorial Level: Introductory Tutorial Duration: 65 mins

#### **Tutorial Outline**

- Topic 1: The Cash Conversion Cycle
  - Definition

Topic 2: Working Investment

Topic 3: Working Capital

- Current Assets
- Current Liabilities
- Current Ratio
- Quick Ratio

#### Topic 4: Shortening the Cash Conversion Cycle

- Delaying payment of accounts payable
- Improved inventory control
- Improved debt collection



# **Commodities – Trading**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the key concepts that are relevant to the pricing of commodity futures
- Recognize the main trading and hedging strategies used by commodity market participants

#### **Tutorial Overview**

This tutorial explains a range of important futures pricing concepts, such as cost of carry, contango, and backwardation, many of which are particular to the commodities market. A variety of commodity trading and hedging strategies are also discussed in detail.

Prerequisite Knowledge Commodities – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 60 minutes

#### **Tutorial Outline**

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Topic 1: Key Pricing & Trading Concepts

- Futures Prices & the Cost of Carry
  - o Example
  - Other Key Commodity Pricing Concepts
    - Contango/Backwardation
    - o Basis
    - Convenience Yield

Topic 2: Trading & Hedging

- Overview of Commodity Trading & Hedging Strategies
  - Key Trading & Hedging Strategies
    - Speculative Trade
    - Cash-and-Carry Arbitrage
    - Reverse Cash-and-Carry Arbitrage
    - Hedging
      - Long Hedge
      - Short Hedge
      - Impact of Changes in the Basis
      - Strip Hedge & Stack Hedge
    - Commodity Swap
    - o Intercommodity Spread
      - Crack Spread
    - Intracommodity Spread
      - Example



# **UK Cybercrime**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize cybercrime and how it threatens the financial services industry
- Demonstrate how IT, physical and socially engineered methods are used to commit or facilitate cybercrime
- List the major types of fraud used by cyber criminals
- Illustrate the key security methods used to minimize the risk of cyberattacks and scams

#### **Tutorial Overview**

This tutorial aims to help financial services staff at all levels manage cybercrime risks. It is designed to give an understanding of personal cybercrime responsibilities as well as the risks to employers.

The tutorial discusses what is meant by cybercrime and the relationship between cybercrime and other types of financial crime, such as fraud.

The information is pitched so that the tutorial is relevant to those with no experience of the UK cybercrime issues, although there is sufficient detail to make the tutorial useful to more senior managers as well.

Prerequisite Knowledge No prior knowledge is assumed

Tutorial Level: Introductory Tutorial Duration: 75 minutes

#### **Tutorial Outline**

Topic One: Cybercrime

- Overview of Cybercrime
- Costs of Cybercrime
  - Effects on the Financial Services Industry
  - Aims of Cybercrime
- Risks Posed to Consumers
- Risks Posed to Businesses

Topic 2: Cybercrime & Insider Threats

- Types of Cybercrime
- Insider Threats
- Phishing, Vishing & Social Engineering
- Web-Based Attacks
- Zero-Day Vulnerabilities

Topic 3: Fraud

- Fraud Committed by Cyber Criminals
- Types of Fraud
  - Accomplice / Illicit Behavior Scams
  - Bogus Products & Services
  - Business-Targeted Scams
  - o Gambling Scams
  - Identity Frauds
  - o Investment Frauds
- Money-Making Scams
- Technological Scams



#### Topic 4: Systems & Controls

- Changing Behaviors
  - Social Media Safe
    - How to be Social Media Safe
  - E-mail Compliance
  - Computer Hardware & Software Safety
  - Password Security
  - o USB Security
  - Remote Working Compliance
  - Escalation Breaches, Events and Suspicions
  - Deploy Safe Surfing Techniques



# Hong Kong Anti-Money Laundering (AML)

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the purposes, methods, and stages of the money laundering process
- Identify the roles of the regulatory bodies in Hong Kong in the fight against money laundering
- List your personal obligations under Hong Kong's laws and regulations
- Recognize the difficulties in identifying terrorist financing and the corresponding offences

#### Tutorial Overview

The need to launder illicit funds is an ongoing problem for criminals. They continue to devise increasingly sophisticated means of laundering funds. The Financial Action Task Force – a specialist anti-money laundering agency – has put financial institutions and their employees on the frontline of the battle against money laundering.

This tutorial explains the stages and ways in which money is laundered. It describes the best practices and legislation that financial institutions and other designated bodies need to follow to counter money laundering and terrorist financing.

Prerequisite Knowledge None

Tutorial Level: Introductory Tutorial Duration: 90 minutes

#### **Tutorial Outline**

Topic 1: Money Laundering & How it is Detected

- What is Money Laundering?
- Stages of Money Laundering
  - Placement
    - o Layering
    - o Integration
- The Placement of Money in the Financial System
- Hiding Dirty Money
- Business & Countries Typically Used for Money Laundering
- Detecting Money Laundering
- Hong Kong's Defense at the Placement Stage
  - Individual Account Applications
  - Corporate Account Applications
- Case Study: Tsoi Chit-tsang

Topic 2: Hong Kong's Legal & Regulatory Framework

- Hong Kong's Approach to Combatting Money Laundering
  - Legislation
  - Regulators in the Financial Sector
    - Hong Kong Monetary Authority (HKMA)
    - Securities & Futures Commission (SFC) of Hong Kong
    - Office of the Commissioner of Insurance (OCI)
    - Joint Financial Intelligence Unit (JFIU)
    - Independent Commission Against Corruption (ICAC)
- Law Enforcement/Criminal Justice Act
- International Cooperation
  - Financial Action Task Force (FATF)
  - Bank for International Settlements (BIS)
  - United Nations (UN)
  - Asia/Pacific Group on Monday Laundering (APG)



Topic 3: Legal & Regulatory Obligations

- Money Laundering Offenses & Penalties
- The "Guideline" on Anti-Money Laundering & Terrorist Financing
  - Customer Acceptance Policy
    - Due Diligence
      - Simplified Due Diligence (SDD)
      - Enhanced Due Diligence (EDD)
    - Politically Exposed Persons (PEPs)
  - Correspondent Banking
  - Keeping Customer Information Up-to-Date
  - Monitoring and Record-Keeping
- Departmental Checklist
- Case Study: State Bank of India

**Topic 4: Curbing Terrorist Financing** 

• Funding Terrorism

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- Difficulty in Detecting Terrorist Financing
- Sources of Funding
  - Charities & non-profit organizations (NPOs)
  - o Illegal activities
  - Collection of monetary gifts
  - Fund-raising activities
  - Legitimate businesses
- Curbing the Financing of Terrorism in Singapore
- Case Study Islamic State of Iraq and the Levant



# **Dividend Policy**

#### **Tutorial Description**

Learning Objectives

On completion of this tutorial you will be able to:

- Describe how dividends are paid
- Explain the difference between the classical and radical view of the dividend payment decision
- Demonstrate how the Modigliani-Miller approach to dividend policy reached its conclusions and what its weaknesses are

#### **Tutorial Overview**

Dividend policies can differ radically between companies. This tutorial looks at the reasons why such differences in dividend policy can occur. The central question that is addressed is whether dividend policy can affect the value of a firm. In an ideal world, it would not; this is the crux of the dividend irrelevance proposition of Modigliani-Miller that is examined in detail here. Two other theories of dividend policy - the traditional and radical view - are also explained in detail.

Prerequisite Knowledge Corporate Finance – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 60 mins

#### **Tutorial Outline**

Topic 1: The Payment of Dividends

- Dates for payment of Dividend
  - Declaration Date With-dividend date
  - o Ex-dividend Date
  - Record Date
  - Payment Date
- Types of dividend Payment Policy
  - Pure residual policy
  - Constant dividend payment ratio
  - o Long-run residual dividend policy
  - o Smoothed dividends policy

Topic 2: The Dividend Payment Decision

- Classical View
- Radical View

#### **Topic 3: Dividend Policy**

- Types
  - Cash dividend
  - Stock Dividend
  - o Extra/Special dividend
- Limitations on dividend policy
  - Profitability
  - o Liquidity
  - Government policy
  - Market Imperfections
  - Behaviour of Competitors

Topic 4: Modigliani-Miller on Dividends

• Modigliani-miller



# Swaps – Pricing & Valuation (Part I)

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Calculate the future value and timing of various cash flows associated with a swap
- Calculate the discount factors applicable to future dates and the present value of a collection of cash flows in a swap

#### **Tutorial Overview**

Valuation of swaps is a two-stage process. It requires determining the size and timing of the cash flows and then calculating the present value of these cash flows. The 'value' of a transaction is simply the difference between the present values of the flows that are due to be received and those that are due to be paid.

This tutorial focuses on the general approach necessary to calculate the value of a swap transaction. It concentrates on the generation and discounted value of future cash flows.

Prerequisite Knowledge Prior to studying this tutorial, you should have a solid understanding of the fundamentals of swaps as outlined in the following tutorials:

Swaps – An Introduction Swaps – Applications

Tutorial Level: Intermediate Tutorial Duration: 60 mins

#### **Tutorial Outline**

Topic 1: Swap Cash Flows

- Swap Dates
- Cash Flows
- Elements of the Cash Flow Calculation
  - Day Count Conventions
  - Payment Frequencies
  - Business Day Conventions
  - o Adjusted/Unadjusted Payments
- Compounded Payments
- Unknown Future Flows Calculating Forwards
- Floating Rate Margins & Basis Swaps

Topic 2: Valuing the Swap Cash Flows

- Discount Factors
- Discount Factors Deposits
- Discount Factors Swap Rates
- Zero-Coupon Rates
- Zero Rates & Par Rates
- Interpolation
- Putting it All Together
- Shifting Rates
- Annuity Factors
- The Value of the Change in Yields PVBP
- Amortizing & Accreting Swaps
- The Floating Leg Valuation



# Swaps – Pricing & Valuation (Part II)

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Define how the yield curve for swap pricing and valuation is derived from different sources
- Build a yield curve from a combination of deposits and money market futures and identify the factors that may affect the curve
- Outline the different conventions prevalent in the major swap markets
- Calculate values for simple swap structures and describe the imperfections and approximations implicit in any such simplified approach

#### **Tutorial Overview**

This second tutorial on swap pricing and valuation extends from the basic techniques introduced in the first tutorial. This second part focuses on the minutiae particular to individual swap markets, and asks the question "Where do the swap rates come from?" The tutorial also shows how simple calculations can give good approximations to otherwise complex results.

#### Prerequisite Knowledge

Prior to studying this tutorial, you should have a basic understanding of swaps and their valuation as outlined in the following tutorials:

Swaps – An Introduction Swaps – Applications Swaps – Pricing & Valuation (Part I)

Tutorial Level: Intermediate Tutorial Duration: 75 mins

#### **Tutorial Outline**

Topic 1: Swap Rates

- Introduction
- The Swap yield Curve
- Interbank Deposit Rates
- Using the Correct Rates
- Money Market Futures Contracts
- Information Contained in Future Prices

Topic 2: Building the Swap Curve

- Generating the Contract Period Discount Factors
- Generating the Discount Factors from Spot
- Convexity Adjustments
- Declining Liquidity
- Longer-Term Rates Government Bonds
- Bond Spreads
- Bond Spreads and Maturity
- Causation

**Topic 3: Market Conventions** 

- Common Market Conventions
- The Major Markets

Topic 4: Valuing Simple Swap Structures

- Conversion between Types of Convention
- Conversion between Types of Interest Rate
- Annual versus Semi-annual
- Forwards Revisited



- Present Value of a Stream of Cash Flows
- Present Value Approximation
- Putting it Together A forward Starting Swap



# **Present Value & Future Value**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the relationship between the present value, future value, and the discount factor
- Calculate the future value of an investment for a given present value and a given interest rate

#### Tutorial Overview

In financial markets, there are many examples of cash flows that occur at some point in the future but which need to be evaluated today. A cash flow in the future has a value today called the present value. This tutorial describes the concepts of present value and future value, and the relationship between them.

Prerequisite Knowledge Interest Calculations

Tutorial Level: Introductory Tutorial Duration: 45 minutes

#### **Tutorial Outline**

Topic 1: Present Value

- What is Present Value (PV)?
- Present Value: Example
- Present Value of Multiple Future Cash Flows
- Present Value of Multiple Future Cash Flows: Example

#### Topic 2: Future Value

- What is Future Value (FV)?
- Calculating Future Value
- Calculating Future Value: Example
- Future Value & Compounding Frequency
- Future Value & Compounding Frequency: Example
- Calculating Present Value from Future Value
- Calculating Present Value from Future Value: Example
- Calculating the Discount Rate or Number of Periods



### **NPV & IRR**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the importance of the NPV rule in identifying profitable investments
- Calculate the internal rate of return (IRR) on an investment and use this in conjunction with NPV to decide between investment alternatives

#### Tutorial Overview

This tutorial provides a framework for analyzing different investments using the fundamental concepts of present value and discounting, and the decision rules of NPV and IRR.

Prerequisite Knowledge Present Value & Future Value

Tutorial Level: Introductory Tutorial Duration: 45 minutes

#### **Tutorial Outline**

Topic 1: Net Present Value (NPV)

- What is Net Present Value (NPV)?
- NPV Formula
- NPV: Example
- Scenario

Topic 2: Internal Rate of Return (IRR)

- What is IRR?
- IRR: Formula
- IRR: Example
- NPV Versus IRR Decision Rules
- NPV Versus IRR Decision Rules: Example
- IRR & Reinvestment Risk



# **Credit Risk – Lessons from the Financial Crisis**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Outline how both banks and regulators failed to understand or quantify the risks that were building up prior to the financial crisis
- Describe how banks' business strategies and risk appetite have been refocused due to the events of the crisis and the introduction of tighter capital requirements under Basel III

#### Tutorial Overview

The global financial crisis has become a defining event in history and will cast a long shadow over financial markets for many years to come. The crisis highlighted many issues, not least of which was some extraordinary mismanagement of credit risk.

This tutorial describes the key mistakes made by banks and some other financial institutions, including too many concentration risks, a lack of understanding of products/risks, inadequate capital, funding and liquidity deficiencies, and issues with external credit ratings. The tutorial also looks at the massive impact the crisis has had on banks' business strategies, operating models, and credit risk appetite, in addition to the regulatory changes that have affected how banks manage credit risk.

Prerequisite Knowledge Credit Risk – Measurement & Capital Requirements

Tutorial Level: Intermediate Tutorial Duration: 60 minutes

#### **Tutorial Outline**

- Topic 1: Lessons from the Financial Crisis
  - Before the Crisis
  - Problems Emerge & Grow
  - Key Issues

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- o Concentration Risk
  - Examples
  - Commonalities
  - Lack of Understanding of Risks
    - Warehoused Assets
    - Implied Support for Securitizations
    - Derivatives Settlement Risks
    - Credit Migration
    - Asset Price Movements
- Insufficient Capital
- Funding & Liquidity
- Credit Ratings

Topic 2: impact of the Financial Crisis on Credit Risk Management

- Business Strategy
- Credit Risk Appetite
- Regulation

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- Regulatory Engagement
- Capital Adequacy Ratio (CAR)
  - Managing CAR
- Transparency & Disclosure



# **Efficient Markets**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the concept of efficient markets
- Discuss the Random Walk Theory
- Identify the different levels of the EMH
- List the various implications of the EMH
- List the main research findings that either support or contradict the different levels of the EMH
- Recognize the concept of adaptive markets

#### **Tutorial Overview**

One of the key factors when building a theoretical framework required for making rational financial decisions and policies is an understanding of the concept of market efficiency. This concept is one of the most widely studied and contentious areas in the financial world today. This tutorial explains in detail the characteristics of an efficient market, describing the random walk theory and examining the different forms of the efficient market hypothesis and their various implications for analysts, management, and investors. It also discusses the concept of adaptive market hypothesis and why it is becoming a popular alternative to EMH. Prerequisite Knowledge

APT & Factor Models

Tutorial Level: Introductory Tutorial Duration: 75 minutes

#### **Tutorial Outline**

Topic 1: Efficient Market Hypothesis (EMH)

- Efficient Market Hypothesis (EMH)
- What is an Efficient Market?
- Effect of New Information on Stock Prices
- High Frequency Trading
- Mispriced Securities
- Random Walk Theory
- Random Walk Theory: An Example
- Mean-Reverting
- Cyclical Patterns
- Levels of Market Efficiency
- Implications of Efficient Market Hypothesis

Topic 2: Market Efficiency: The Evidence

- Efficient Market Efficiency: The Evidence
- Evidence of Market Efficiency
- Weak Form
- Semi-Strong Form
- Strong Form
- Evidence of Market Inefficiency

Topic 3: Adaptive Markets Hypothesis

- Coming Next
- Critique of EMH
- Adaptive Markets Hypothesis
- Behavioral Bias
- Efficient Markets under AMH
- Implications of AMH



# **Risk & Return – Efficient & Optimal Portfolios**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Explain how investors can find a portfolio that minimizes their risk exposure
- Recognize the significance of the efficient frontier in terms of portfolio selection
- Choose the optimal portfolio along an efficient frontier curve

#### **Tutorial Overview**

While there are almost endless possibilities of portfolio composition, we show how given a specific set of stocks, the optimal portfolio composition can be calculated. This tutorial is the same portfolio for all, irrespective of risk preferences. This tutorial shows how we arrive at the optimal portfolio and why it is the same tutorial that every rational investor will choose.

Prerequisite Knowledge Risk & Return – Portfolios

Tutorial Level: Introductory Tutorial Duration: 60 minutes

#### **Tutorial Outline**

Topic 1: Minimum Variance Portfolio

- Minimum Variance Portfolio
- Diversification
- Effect of Diversification
- Minimum Variance Portfolio
- Correlation Coefficient
- Calculating the Correlation Coefficient in Excel
- Correlation Coefficient: Values
- Calculating the Minimum Variance Portfolio: Multi Asset Portfolio
- Calculating the Minimum Variance Portfolio: Example
- Scenario: Minimum Variance Portfolio

#### **Topic 2: Efficient Frontier**

- Efficient Frontier
- Efficient Portfolios
- Efficient Frontier
- Constructing the Efficient Frontier
- Constructing the Efficient Frontier: An Example

#### Topic 3: The Optimal Portfolio

- The Optimal Portfolio
- Risk/Return Trade-off
- Sharpe Ratio
- Calculating the Optimal Portfolio
- Calculating the Optimal Portfolio: An Example

#### Topic 4: The Complete Portfolio

- The Complete Portfolio
- Introducing the Risk-Free Asset
- Capital Market Line (CML)
- Riskless Borrowing & Lending



# **Private Equity – An Introduction**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the key features of private equity
- Recognize the investment process and the key participants in that process
- Define the key private equity performance measurement metrics

#### **Tutorial Overview**

Private equity (PE) is a generic term used for capital investments outside of the public markets. It represents a different way of "owning" companies compared with the more familiar stock market investment. This tutorial describes the key features of the modern PE industry, focusing in particular on the private equity lifecycle, the different forms of private equity, and the methods of measuring private equity performance.

Prerequisite Knowledge Investment – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 60 minutes

#### **Tutorial Outline**

Topic 1: Overview of Private Equity

- What Is Private Equity?
- A Note on Terminology
- PE Lifecycle
- Types of PE
- PE Firms

Topic 2: Investing in Private Equity

- Methods of Investing
- Role of General Partners
- Use of Leverage
- Leverage & Risk
- Fundraising & Capital Commitments
- Dry Powder
- The J-Curve
- Fees
- Distribution Waterfall
- Distribution Waterfall: Example
- Criticism of the "2-and-20" Fee Structure

Topic 3: Performance Measurement

- Internal Measurements
- Public Market Equivalent (PME)
- Other Issues
- Scenario: A Private Equity Investment



# Private Equity – Investing

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the qualities of an ideal investment target
- Define the various stages in investing in a target company
- Recognize the importance of target valuation and achieving an optimal capital structure when structuring a deal
- Identify the typical holding period for a PE investment and the exit mechanisms available to the PE firm

#### **Tutorial Overview**

This tutorial looks at the how a PE firm identifies an ideal target company and the stages it needs to go through to realize its investment. The structuring of the transaction and the exit mechanisms available to the private equity firm are also examined in detail.

Prerequisite Knowledge Private Equity – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 50 minutes

#### **Tutorial Outline**

Topic 1: Investment Targets

- What Makes a Good PE Investment?
- Qualities of an Ideal PE Target

Topic 2: Investing in a Target Company

- Management Buyouts/Buy-ins
- Other Types of PE Investment
- Key Stages in the PE Investment Process
- Initial Stage
- Auctions
- Auction Process
- Auctions: Due Diligence

Topic 3: Target Valuation & Deal Structuring

- Company Valuation
- EV/EBITDA
- EV/EBITDA: Issues
- Structuring the Deal
- Structuring the Deal: Debt
- Structuring the Deal: Equity
- Structuring the Deal: Mezzanine Finance
- Achieving an Optimal Capital Structure

Topic 4: Holding Period & Exits

- Holding Period
- Holding Period: Fees
- Exits



# **Private Wealth Management – Alternative Investments**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the attractions and drawbacks of alternative investments for private wealth clients
- Identify the importance of hedge funds and identify their key sub-types
- Recognize the benefits and drawbacks of private markets and private equity
- Define the real asset class and list its key subtypes

#### **Tutorial Overview**

Alternative investments are those that are not included in the traditional investment classes and typically include investments such as private equity, hedge funds, and real assets. This tutorial looks at the benefits and risks of alternative investments and associated strategies for private wealth clients and describes the main sub-classes in this category.

Prerequisite Knowledge Private Wealth Management – Investment Services

Tutorial Level: Introductory Tutorial Duration: 75 minutes

#### **Tutorial Outline**

Topic 1: Alternative Investments for Private Wealth Clients

- Overview of Alternative Investments
- Alternative Investment Strategies
- Alternative Investments: Challenges for Private Wealth Clients
- Benefits & Drawbacks of Alternative Investments

#### Topic 2: Hedge Funds

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- Overview of Hedge Funds
- Evolution of Hedge Funds
  - Types of Hedge Fund
  - Long-Short
    - Event Driven
      - Distressed Debt
        - Merger Arbitrage
        - Special Situations (Activist)
    - o Relative Value
      - Convertible Arbitrage
      - Asset-Backed Securities Arbitrage
      - Statistical Arbitrage
      - Credit Arbitrage
      - Fixed Income Arbitrage
    - Directional
      - Global Macro
      - Short Bias
      - Emerging Markets
    - Fund of Funds

Topic 3: Private Equity

- Overview of Private Markets
- Investing in Private Equity
- Types of Private Equity
  - Direct Investment
  - Private Equity Fund
  - Fund of (Private Equity) Funds



Topic 4: Real Assets

- Overview of Real Assets
- Types of Real Asset
  - Commodities
  - o Real Estate
  - $\circ$  Collectables
  - o Infrastructure



# **Private Wealth Management – An Introduction**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Distinguish private banking activities from wealth management activities
- Recognize how the private wealth management industry has evolved over the years
- Identify the different types of private client service propositions and the various sources of revenue for private wealth management firms

#### **Tutorial Overview**

This tutorial introduces and defines the concepts of private banking and wealth management. It identifies the general activities of private banking and wealth management businesses, the different types of business and their value proposition, and the various fee structures and revenue models. The tutorial also outlines the evolved history and current trends in the industry.

Prerequisite Knowledge Financial Markets – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

#### **Tutorial Outline**

Topic 1: Overview of Private Banking & Wealth Management

- A Perspective on Wealth
- Definition of Private Banking
  - Private Bankers
- Definition of Wealth Management
  - Wealth Managers
- Retail Banking, Premium Banking, & Private Banking
- Qualifying Clients

**Topic 2: Industry Development** 

- History & Evolution
- The Private Banking & Wealth Management Industry Today
- Types of Private Bank & Wealth Management Firms
  - Retail/Consumer Banks
    - Investment & Merchant Banks
    - o Universal Banks
    - Trustee Firms
    - Brokerage Firms
    - Family Offices

Topic 3: Private Client Service Propositions & Sources of Revenue

- Value Propositions & Client Service Models
  - Relationship & Distribution Management
  - Wealth Management & Planning
  - o Customization of Banking & Investment Products
  - Transaction & Reporting Services
- Sources of Income & Revenue
  - Transaction Fees & Commissions
  - o Interest Income
  - o Trading Income
- Revenue Fee Models
  - Transactional Fee Model
  - Advisory Fee Model
  - Hybrid Fee Model



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- Industry Challenges o Risk & Compliance Requirements

  - Tax Transparency & Reporting
     Higher Client Expectations
     Outdated Client Service Models
     Requirement for Digital Services

  - Competition from Non-Traditional & Disruptive Market Players 0



# **Private Wealth Management – Banking & Deposit Services**

#### **Tutorial Description**

Objectives

On completion of this tutorial, you will be able to:

- Identify the key deposit-based products offered by private banks and wealth management firms
- List the key transaction banking services required by private wealth clients
- Recognize the importance of international banking services for high net worth clients who live and work abroad

#### Tutorial Overview

This tutorial looks at the key services provided by private banks and wealth management firms in the areas of deposit-taking and transaction banking. It also explores the range of banking and other wealth services to high net worth clients who live and work abroad or have substantial business dealings overseas.

Prerequisite Knowledge Private Wealth Management – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

#### **Tutorial Outline**

Topic 1: Deposit-Taking Services

- Overview of Deposit Products
  - Call Deposit Accounts
  - o Term Deposits
  - Savings Accounts
- Capital Market Instruments
  - o Government Bonds & Notes
  - Bank Bills of Exchange
  - Negotiable Certificates of Deposit (NCDs)
  - Commercial Paper (CP)
  - Bespoke Products
- Cash Broking & Other Services

Topic 2: Transaction Banking & Payment Services

- Overview of Transaction Banking & Payment Services
- Checking Accounts
- Overdraft Facilities
- Cash Management Accounts (CMAs)
- Internet Banking
- Telephone Banking

Topic 3: International Banking & Wealth Services

- Overview of International Banking Services
- International Transaction Services
- Domestic & Foreign Deposit Services
- Other International Banking Services



# **Private Wealth Management – Becoming a Trusted Advisor**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the role of trust in wealth relationships and list the various stages of the trust spectrum from the perspective of the wealth manager and of the client
- Recognize the role of the trusted advisor and the key skills required to nurture trust
- Appreciate the importance of continuous improvement and client feedback in building trust

#### **Tutorial Overview**

This tutorial looks at the importance of trust between the wealth manager and the client and the benefits of trust for both parties. The skills and phases involved in becoming a trusted advisor are also examined in detail.

Prerequisite Knowledge Private Wealth Management – Client Acquisition & Relationship Management

Tutorial Level: Introductory Tutorial Duration: 75 minutes

#### **Tutorial Outline**

Topic 1: Building Client Trust

- Overview of Trust
- Trust Selling
- Building the Trust Relationship
- The Wealth Manager as Trusted Advisor
- Trusted Advisor: Grades of Trust
- Earning & Enhancing Trust
- Offering Advice

Topic 2: Skills of the Trusted Advisor

- Developing a Trust Relationship
- Trusted Advisor Skills
  - Listening
  - o Clarifying
  - o Reality Checking
  - o Getting Commitment

Topic 3: Nurturing Trust in Private Wealth Management

- The Need for Continuous Improvement
- Asking the Client for Feedback
- Getting Client Acceptance
- Cross-Selling



### **Private Wealth Management – Behavioral Finance**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the importance of behavioral finance and prospect theory in understanding the motives and actions of private clients
- Identify the key behavioral biases that lead to suboptimal investment decisions
- Recognize how private wealth managers discuss behavioral biases and investment risk with clients

#### **Tutorial Overview**

Behavioral finance is a field of finance that proposes psychology-based theories to explain irrational investor decisions. Such decisions result from cognitive and emotional biases that can cause financial market values to drift substantially away from fundamental values. An understanding of behavioral finance is crucial for private wealth managers in order to identify and eliminate wealth-destroying behavioral biases in both themselves and their clients.

Prerequisite Knowledge Private Wealth Management – Client Investment & Wealth Allocation

Tutorial Level: Introductory Tutorial Duration: 75 minutes

#### **Tutorial Outline**

Topic 1: Behavioral Finance & Investor Rationality

- Overview of Behavioral Finance
- The Rational Investor
- Bounded Rationality
- Prospect Theory
  - Profits & Losses

Topic 2: Investor Behavioral Biases

- Overview of Behavioral Biases
  - $\circ \quad \text{Loss Aversion} \quad$
  - o Regret Aversion
  - o "Get Evenitis"
    - Wealth Management Discussions
  - o Anchoring
  - o Mental Accounting
  - Self-Attribution
  - Familiarity
  - Overconfidence
  - o Other Investor Biases
    - Representativeness Bias
      - Framing Bias
      - Hindsight Bias
      - Confirmation Bias
      - Attention Bias
      - Gambler's Fallacy
      - Endowment Effect

# Private Wealth Management – Client Acquisition & Relationship Management

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

• Identify the challenges faced by private wealth managers in servicing a portfolio of clients

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- Recognize the importance of growing the client base as well as retaining and protecting existing clients and the key ingredients to achieving success in this area
- Identify the process of acquiring new clients and recognize how the wealth manager can handle client objections and concerns

#### **Tutorial Overview**

This tutorial focuses specifically on the challenges associated with managing the relationships in a client portfolio, including winning new clients while simultaneously retaining and growing business from existing clients.

Prerequisite Knowledge Private Wealth Management – Client Investment & Wealth Allocation

Tutorial Level: Introductory Tutorial Duration: 75 minutes

#### **Tutorial Outline**

Topic 1: Client Segmentation & Relationship Strategies

- Wealth Management & Client Portfolios
- Client Segmentation: Value & Revenue
- Client Value Matrix
- Competitive Analysis
- Client Relationships & Time Management

Topic 2: Client Portfolio Management

- Overview of Client Portfolio Management
- Building Client Trust: Personal Attributes of the Wealth Manager
- Retaining & Growing Clients
- Identifying Client Needs (Prospecting)
- Positioning

Topic 3: Client Acquisition

- Overview of Client Acquisition
- Acquiring New Clients
- Sourcing New Clients
  - Online
  - Face-To-Face
- Prospecting, Qualifying, & Winning New Clients
- Overcoming Client Objections



### Private Wealth Management – Client Investment & Wealth Allocation

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the differences and weaknesses of MPT in relation to private client investment portfolios
- Recognize how the investment allocation behavior of HNW clients is based on complex considerations with different allocations based on risk appetite and stage in lifecycle
- Recall how client personal and financial needs, aspirations and risk appetites change over time and how this impacts portfolio construction and client investment product preferences

#### **Tutorial Overview**

This tutorial focuses on the client needs and associated risk appetites that drive client investing behavior and processes. The wealth-lifestyle objectives of the client and investment allocation decisions used to meet these objectives are also examined in detail.

Prerequisite Knowledge Private Wealth Management – Ultra-HNWIs & Family Offices

Tutorial Level: Introductory Tutorial Duration: 75 minutes

#### **Tutorial Outline**

Topic 1: Modern Portfolio Theory (MPT) & Private Client Needs & Risks

- Overview of Private Client Investing & MPT
- MPT & Client Portfolios
- MPT & Challenges in Wealth Management
- Overview of Client Needs
- Funding Client Needs
- Client Risks
  - o Market Risk
  - o Liquidity Risk
  - o Lifecycle Risk
  - o Event Risk
- Client Tax Management

Topic 2: Client Asset Allocation & Investment Choices

- Overview of Client Asset Allocations & Investment Choices
- Client Needs & Investment Allocation
  - o Example
- Managing Client Risks
- Lifecycle Investing & Human Capital
  - Example

**Topic 3: Client Investment Allocation Framework** 

- Overview of the Client Investment Allocation Framework
- Asset Allocation vs. Risk Allocation
- Dimensions of Risk
  - o Personal Lifestyle
  - Relative Lifestyle
  - Aspirational Lifestyle
- Asset Allocation & Wealth Objective Matching
  - Example
  - Risk Management
- Asset Allocation & the Private Wealth Manager





# **Private Wealth Management – Clients**

#### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Define the rationale for classifying and grouping wealth management clients
- Recognize the need to define and group clients with like characteristics, and understand the service offerings to each client group in the customer wealth "pyramid"
- Identify the spectrum of client styles and attitudes to private wealth management being a range from the most independent and self-directed person to the client needing a full private wealth management support service

#### **Tutorial Overview**

This tutorial focuses on the different types of wealth management client as defined by the wealth "pyramid." The spectrum of client styles and attitudes to private wealth management are reviewed in detail. The tutorial also looks at the key types and characteristics of client personalities used in contemporary private wealth management.

Prerequisite Knowledge Private Wealth Management – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

#### **Tutorial Outline**

**Topic 1: Client Segmentation** 

- Client Complexity & Wealth Management Services
- Client Segmentation
  - Criteria
  - o Risks
- Client Categories & Service Levels
- Client Wealth Classification Pyramid
  - o Affluent
  - High Net Worth (HNW)
  - Very High Net Worth (VHNW)
  - High Ultra Net Worth (UHNW)
- Family Offices
- Segmentation Policy & Client Identity

Topic 2: Client Types

- Client Professions & Sources of Wealth
- Executives
- Business Owners & Entrepreneurs
  - o Private Banking Needs
- Professional Athletes
- Entertainers
- Medical & Legal Practitioners
- Expatriates
- Inheritors
- Gatekeepers, Influencers, & Referrers

Topic 3: Client Perspectives, Attitudes, & Orientation

- Family & Business Needs of Clients
- Meeting the Family Needs of Clients
- Client Financial Lifecycles
- Client Wealth Management Attitudes & Orientation



- Self-directed 0
- Collaborator 0
- 0
- Delegator Philanthropist 0
- 0 Trends



# **Private Wealth Management – Compliance Considerations**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Define the scope and framework of compliance in financial institutions and recognize the importance of mitigating the consequences of noncompliance
- Identify the key compliance themes that apply specifically to private wealth management firms, particularly the importance of the customer and employee due diligence process
- Recognize the main compliance requirements for private banks and wealth management firms, especially codes of conduct, cross-border transactions, customer investment suitability, and responsible lending

### **Tutorial Overview**

This tutorial looks at the area of compliance and the reasons behind the increased regulatory focus on financial institutions and private wealth management firms in recent times.

Prerequisite Knowledge Private Wealth Management – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

### **Tutorial Outline**

Topic One: The Compliance Function

- Overview of Compliance
- Compliance & The Wealth Management Firm
- Compliance Framework
- Importance of Compliance
- Dealing with Regulatory Complexity

Topic Two: Compliance in Private Wealth Management

- Overview of Compliance in a Wealth Management
- Employee Due Diligence (EDD)
- Customer Due Diligence (CDD)
  - Sources of Information
  - Know Your Customer (KYC)
- Suspicious Activity Reporting (SAR)
- Risk of Fraud

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- Preventing the Risk of Fraud
- Data Protection
  - Records Management & Confidentiality Agreements
  - Conflicts of Interest
    - Managing & Resolving Conflicts of Interest

Topic Three: Key Compliance Issues

- Overview of Compliance Issues
- Codes of Conduct
  - Professional Conduct & Competency
  - o Market Conduct
- International Transactions with Nonresident Clients
- Investment Suitability
  - Customer Profiling
  - Product Classification
  - Full Disclosure
- Responsible Lending
- The Future of Compliance in Private Wealth Management



# **Private Wealth Management – Credit & Lending Services**

### **Tutorial Description**

#### Objectives

On completion of this tutorial, you will be able to:

- Define the general, environment for lending to private wealth clients, and regulatory and compliance issues related to such lending
- Identify the key types of personal loan to HNW clients
- Recognize the main commercial lending structures used in the private wealth management industry
- Identify other types of credit extended to private wealth clients

### Tutorial Overview

This tutorial provides an overview of the key loan types and structures used to extend credit to private wealth clients. The tutorial also explores the general lending environment in the private wealth management industry and regulatory and compliance issues associated with such lending.

Prerequisite Knowledge Private Wealth Management – An Introduction

Tutorial Level: Introductory Tutorial Duration: 75 minutes

**Tutorial Outline** 

Topic 1: Extending Credit to Private Clients

- Overview of Private Wealth Credit
- General Environment for Lending to Private Clients
- Legal & Compliance Environment
- Loan Processing & Structuring
- Client Issues

Topic 2: Personal Lending

- Overview of Personal Loans
- Home Loans
- Personal Loans
- Credit Cards
- Other Types of Personal Loan
  - Low Document (Low Doc) Loans
  - o Specialist Residential Loans
  - Self-Employed Mortgages (Contractor Loans)
    - Relocation & Bridging Loans
    - Building & Renovation Loans
    - Reverse Mortgages
    - Nonresident Lending/Overseas Mortgages
    - Collateral Loans (Lombard Loans)

**Topic 3: Commercial Lending** 

- Overview of Commercial Lending to Private Clients
- Structuring Commercial Lending Applications
- Real Estate & Development Finance



- Trade & Receivables Financing
  - o Equipment Finance
  - Motor Vehicle Finance & Secured Transactions
  - Hire Purchase (HP)
  - Leasing
    - Operating Lease
    - Finance Lease

**Cross-Selling Opportunities** 

o Risk Management Issues

Topic 4: Other Types of Lending

- Other Types of Private Client Lending
- Mezzanine Finance

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- Venture Capital (VC)
  - Providers
- Capital Markets
- Indemnity Guarantees
- Exotic Finance
- Alternative Financing Techniques



### **Private Wealth Management – Estate Planning**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the key benefits of an estate plan for private wealth clients and the role of the wealth manager in estate planning
- List the key steps in the estate planning process
- Recognize the importance of regulatory compliance, taxation, and trusts in estate planning

### **Tutorial Overview**

Estate planning is a key phase of a client's wealth journey and centers on the transfer of wealth to the next generation of heirs and valued beneficiaries, or to philanthropic purposes. This tutorial looks at the benefits and risks of estate planning, the main steps in the estate planning process, and other key estate planning issues such as regulatory compliance and taxation.

Prerequisite Knowledge Private Wealth Management – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

### **Tutorial Outline**

Topic One: Estate Planning & Wealth Management

- Overview of Estate Planning
- Estate Planning Concepts
- Trusts
  - Types of Trust
- Benefits of Estate Planning
- Estate Planning & the Wealth Manager
- Risks for the Wealth Manager

Topic Two: The Estate Planning Process

- Overview of the Estate Planning Process
- Steps in the Estate Planning Process

Topic Three: Other Issues in Estate Planning

- Compliance & Wealth Relationship Issues
- Estate Taxation



# **Private Wealth Management – Financial Planning**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the importance of financial planning for private wealth clients
- Identify the key steps in the financial planning process
- Recognize the regulatory and industry developments in HNW financial planning at a global level

### Tutorial Overview

This tutorial provides an overview of financial planning for high net worth clients. We examine in detail the steps in the financial planning process and examine regulatory and industry developments in financial planning for private clients worldwide.

Prerequisite Knowledge Private Wealth Management – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

### **Tutorial Outline**

Topic 1: Financial Planning for Private Clients

- Overview of Financial Planning
- Financial Planning from the Private Client Perspective
- The Role of the Financial Planner
- Knowing the Client
  - Fact-Finding
- Product- Vs. Goals-Based Advice
- Financial Planning Qualifications

**Topic 2: The Financial Planning Process** 

- Overview of the Financial Planning Process
- Key Elements of the Financial Planning Process
- Steps in the Financial Planning Process
- The Financial Planning Process: Back-End Issues

Topic 3: Regulatory & Industry Developments

- Future Challenges for Financial Planning & Advice
- Evolving Community & Regulatory Expectations
- The MIFID II Framework
- Foreign Account Tax Compliance Act (FATCA)
- Common Reporting Standard (CRS)
- CRS Requirements
- Robo-Advice
  - o Criticisms
- Global Trends in Financial Planning



### **Private Wealth Management – Investment Services**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the importance of portfolio management and investment support for high net worth clients
- Identify the key fiduciary and custody services provided by wealth management businesses
- Define the core specialist investment services provided to private clients

### Tutorial Overview

This tutorial provides an overview of investment services for private wealth clients. It examines the importance of investment support and portfolio management as well as fiduciary and custody, and specialist investment services.

Prerequisite Knowledge Private Wealth Management – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

### **Tutorial Outline**

Topic 1: Portfolio Management & Investment Support

- Overview of Investment Services
- Strategic Advice & Research
   o Investment Architecture
- Portfolio Management & Investment Selection
- Discretionary Portfolio Management
- Nondiscretionary Portfolio Management
- Investment Vehicles & Products
- Other Investment Support Services

Topic 2: Fiduciary & Custody Services

- Overview of Fiduciary Services
- Benefits of Fiduciary Services for Clients
- Trustee Services
  - Estate Planning
- Custody Services

Topic 3: Specialist Investment Services

- Overview of Specialist Investment Services
- Corporate Advisory Solutions
- Bespoke Investment Services
- Family Office Advice
- Immigrant Investor Programs



# Scenario – Managing a High Net Worth Client

### Description

#### Overview

This scenario explores how various private wealth management concepts are used in practice. You will observe a situation where a private banker manages a relationship with a client, with support from other personnel. The client is interviewed by the private banker as part of a regular portfolio review and you will follow the line of discussion around needs analysis, risk and reward, due diligence, and the concerns of the client.

### Prerequisite Knowledge

A basic understanding of wealth management products and services as well as the key aspects of client relationship management is assumed.

Level: Intermediate Duration: 45 minutes



# **Risk Management – An Introduction**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Define some key risk concepts and the major risk types
- Identify the types of activity that give rise to risk in banking and the factors that influence risk
  exposure and risk profiles
- Recognize the main criteria for successful risk management and distinguish between topdown and bottom-up risk management

### **Tutorial Overview**

Banks must accept risk in order to achieve their business objectives. Over time, performance should be monitored and managed to ensure that risks that have been accepted remain within risk appetite and that new or unexpected risks do not emerge. This tutorial provides a high-level overview of risk management practices in banking today.

Prerequisite Knowledge Risk – Primer

Tutorial Level: Introductory Tutorial Duration: 75 minutes

### **Tutorial Outline**

Topic 1: Key Risk Concepts & Types

- Key Risk Concepts & Types
- The Human Factor & Risk Decision-Making
- Key Risk Concepts
- Risk Types
- Why Use Risk Types?
- Scenario: Risk Types
- Risk Measurement

### Topic 2: Risk & Banking

- Risk & Banking
- Sources of Risk (Upside)
- Sources of Risk (Downside)
- Risk Exposure
- Gross vs. Net Exposure
- Risk Profile
- Risk Profile: Reporting
- Influences on Risk Exposures & Risk Profiles
- Risk & Reward: Sources of Earnings
- Risk & Reward: Pricing Considerations
- Costs of Taking Risks

Topic 3: Managing Risk

- Managing Risk
- Risk Management Success Criteria
- Top-Down & Bottom-Up Risk Management
- Risk Appetite
- Risk Appetite Statements
- Risk Appetite: Exceptions & Breaches
- Risk Management Framework
- Risk Culture



• Risk Culture & Inappropriate Behaviors



### Risk Management – Business Strategy & Risk Decision-Making

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the relationship between business strategy and risk and the importance of aligning risk appetite with strategy
- Identify the stages in the risk decisioning process and how such decisions can impact risk exposure

### **Tutorial Overview**

This tutorial describes how banks take risk into account when setting business strategy and how risk appetite is aligned with business objectives once the strategy is determined. It also explains the importance of a risk management framework and how the various elements of the framework work together when setting and implementing risk appetite. Finally, the tutorial examines the risk decision process in detail and outlines the factors, including the human element, that can affect decision-making.

Prerequisite Knowledge Risk Management – Risk Types & Measurement

Tutorial Level: Introductory Tutorial Duration: 50 minutes

### **Tutorial Outline**

Topic 1: Business Strategy & Risk

- Business Strategy & Risk
- Banking & Risk
- Business Strategy & Risk
- Business Strategy & Operating Environment: Internal Factors
- Business Strategy & Operating Environment: External Factors
- Risk-Reward & Regulatory Compliance
- Risk-Reward & Regulatory Compliance: Key Aspects
- Risk Appetite
- Setting & Maintaining Risk Appetite
- Risk Appetite Statements
- Implementing Effective Risk Appetite Statements
- Risk Management Framework (RMF)
- Top-Down vs. Bottom-Up Risk Management
- Risk Appetite Setting & RMFs
- Risk Culture
- Risk Culture & Controls

### Topic 2: Risk Decision-Making

- Risk Decision-Making
- The Risk Decision Process
- Examples of Risk Decisions
- Risk Decisions & Approvals
- Factors Influencing the Risk Decision Process
- Human Element in the Risk Decision Process
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## **Risk Management – Risk Types & Measurement**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the main risk types and how they influence the risk management framework
- Recognize the main risk measures and the benefits and issues associated with their use

### **Tutorial Overview**

Banks must manage numerous types of risk that arise from their day-to-day activities. But their ability to measure – and therefore manage – risk varies considerably by risk type. Some, such as credit and market risk, are relatively easy to measure but others, such as operational risk, are far more difficult. This tutorial covers the main risk types, such as those mentioned, and the measurement of these and other types of risk that banks face.

Prerequisite Knowledge Risk Management – An Introduction

Tutorial Level: Introductory Tutorial Duration: 45 minutes

### **Tutorial Outline**

Topic 1: Risk Types

- Risk Types
- Allocating Individual Risks to Different Risk Types
- Allocating Individual Risks to Different Risk Types: Example
- Interrelated Risks
- Risk Types & Risk Organization
- Advantages & Disadvantages of Risk Types
- Risk Types & Regulatory Requirements

Topic 2: Risk Measurement

- Risk Measurement
- Why Measure Risk?
- Risk Types & Risk Measurement
- What Should Be Measured?
- Examples of Risk Measures
- Aggregating Risk Measures
- Monetary Values
- Scenario: Calculating & Reporting Monetary Values
- Other Risk Measures



# **Risk Management – Tools & Techniques**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the different approaches that banks can take to risk management
- Identify the various tools and techniques that can be used to manage or mitigate risk

### **Tutorial Overview**

This tutorial examines the difference between "originate-to-hold" and "proactive" approaches to managing risk as well the various tools and techniques available for managing risk. These include tools and techniques for assessing risk and make risk decisions, reducing the likelihood of a risk event occurring, reducing the impact of a risk event, and managing risk exposure. The tutorial also outlines the many factors to be taken into account when selecting a risk management tool or technique for a particular situation.

Prerequisite Knowledge Risk Management – Business Strategy & Risk Decision-Making

Tutorial Level: Introductory Tutorial Duration: 60 minutes

### **Tutorial Outline**

Topic 1: Approaches to Managing Risk

- Approaches to Managing Risk
- Originate-to-Hold
- Proactive Risk Management
- Proactive Risk Management: Pros & Cons
- Blended Approach
- Blended Approach: A Visual Representation
- Risk Exposure & Risk Types

### Topic 2: Tools & Techniques

- Tools & Techniques
- Using Tools & Techniques to Assess & Manage Risk
- Credit Grades
- Automated Decisioning Systems
- Automated Decisioning Systems: Pros & Cons
- Capacity Planning
- Systems Redundancy
- Netting
- Scenario: Netting
- Matching
- Simultaneous Exchange (DVP)
- Insurance
- Insurance Claims
- Credit Insurance
- Credit Insurance as Risk Mitigation
- Mitigation (Collateral/Security)
- Common Forms of Mitigation
- Securitization
- Derivatives Hedging
- Derivatives Hedging: Example
- Other Ways to Manage Exposure
- Factors Influencing the Choice of Tool or Technique



### **GDPR**

### Tutorial Description:

On completion of this tutorial, you will be able to:

- Define the material and territorial scope of the General Data Protection Regulation (GDPR) as well as fundamental GDPR concepts such as "personal data" and "processing"
- Recognize the key responsibilities of data controllers in relation to the processing of personal data as described by the GDPR's data protection principles
- Identify the rights of data subjects under the GDPR
- Describe other key concepts associated with the GDPR, such as consent, data protection by design and by default, data transfers, and data protection impact assessments

### **Tutorial Overview**

Data protection legislation is concerned with upholding the privacy rights of individuals in relation to their personal data. This tutorial provides a high-level overview of the EU's GDPR and its significance in terms of protecting an individual's privacy in today's world.

Prerequisite Knowledge None

Tutorial Level: Introductory Tutorial Duration: 50 minutes

### Tutorial Outline:

Topic 1: Scope & Key Definitions

- Scope & Key Definitions
- Scope of the GDPR
- Scenario: In or Out of Scope?
- Personal Data
- Processing of Personal Data
- Scenario: Personal Data

**Topic 2: Data Protection Principles** 

- Data Protection Principles
- What Are the GDPR's Data Protection Principles?
- Scenario: Data Protection Principles

Topic 3: Rights of Data Subjects

- Rights of Data Subjects
- What Are Data Subjects' Rights?

Topic 4: Other Key GDPR Areas & Concepts

- Other Key GDPR Areas & Concepts
- Key GDPR Concepts
- Scenario: Consent
- Notification of Breaches
- Remedies, Liability, & Penalties



# **Corporate Valuation – An Introduction**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the purpose of corporate valuation and calculate the key valuation metrics
- Distinguish between absolute and relative valuation methodologies

### **Tutorial Overview**

This tutorial introduces the common valuation techniques employed by analysts when valuing companies. These techniques fall under the general categories of absolute valuation methods (such as DCF analysis) and relative valuation methods (trading comps and transaction comps).

The tutorial outlines the high-level approach used in each of these methods and demonstrates how they can be combined to build a picture of a company's overall value.

Prerequisite Knowledge Three-Statement Modeling

Tutorial Level: Intermediate Tutorial Duration: 60 mins

### **Tutorial Outline**

Topic 1: Basics of Corporate Valuation

- The Importance of Valuation
- Main Methods of Valuing Companies
  - Absolute Valuation
    - Discounted Cash Flow (DCF) Analysis
  - o Relative Valuation
    - Trading Comparables Analysis
    - Transaction Comparables Analysis
- Factors Affecting Valuations
- Key Valuation Metrics
  - o 52-Week Range
  - Market Capitalization (Equity Value)
  - o P/E Ratio
  - Enterprise Value (EV)
- Valuation Outputs: Football Field Analysis
  - Valuation Methods Used in Football Field Analysis

Topic 2: Valuation Methods

- Relative Valuation
  - Trading Comps
  - Transaction Comps
  - An Analogy
  - Financial Metrics
    - EV/Sales
    - EV/EBITDA
    - EV/EBIT
    - P/E
  - Absolute Valuation

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- Free Cash Flow
  - Calculating Free Cash Flow
    - Free Cash Flow to the Firm (FCFF)
    - Free Cash Flow to Equity (FCFE)
    - Forecasting the Cash Flows
      - Gordon Growth Model



# **Corporate Valuation – LBO Analysis**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the participants in an LBO deal and the factors that make a company suitable for a leveraged buyout
- Recognize the sources of return for LBO investors and how these returns are measured
- Identify the key components of a typical LBO model

### **Tutorial Overview**

This tutorial describes the main concerns for financial sponsors (private equity firms) when they seek out potential companies in which to invest. It explains the many factors that make a company an attractive investment for LBO purposes and describes in detail how PE firms make money on these leveraged buyout deals. The tutorial also outlines how analysts working on an LBO deal build a model to calculate the risks and returns associated with the transaction.

Prerequisite Knowledge Corporate Valuation – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 60 mins

### **Tutorial Outline**

Topic 1: Basics of LBO Deals

- Contextual Example
  - Apollo's Acquisition of ADT
- LBO Deal Structure & Participants
  - Lender(s)
  - Financial Buyer
  - o Target Company
- What Makes a Company Suitable for an LBO?
  - o Steady, Predictable Cash Flows
  - o Strong Balance Sheet with Low Levels of Current Debt
  - Low EV/EBITDA Multiple
  - o Good Quality Assets That Can Be Used as Loan Collateral
  - Potential for Cost Reductions & Operating Efficiencies
  - Mature Industry/Company
  - o Strong Management Team
  - Low Future Capital Expenditure & Working Capital Requirements
  - Good Exit Opportunities
  - Possible Sales of Underperforming Assets
  - Strong Market Position & Competitive Advantages

Topic 2: Profiting from LBO Deals

- Hurdle Rates
- Sources of Return
  - Deleveraging
  - o Margin Growth
  - o Multiple Expansion
- Measuring Returns
  - Money Multiple (Cash Multiple/Cash-on-Cash Multiple)
  - Internal Rate of Return (IRR)
- Scenario: Measuring Returns
  - Calculating Returns from Deleveraging
  - Calculating Returns from Margin Growth
  - o Calculating Returns from Multiple Expansion
  - o Calculating the IRR



Topic 3: Anatomy of an LBO Model

- Key Inputs & Drivers ٠
- **Operating Model** •
- Sources & Uses of Funds Statement •
- Debt Schedule •
- Forecast Scenarios •
  - Management Case
  - Base Case 0
  - Downside CaseSpecific Cases
- Model Outputs •
  - Returns Analysis
  - Credit Metrics





# **Corporate Valuation – Merger Analysis**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the purpose of an upfront analysis before building a merger model
- Recognize the different sources of financing for a merger
- Identify the steps involved in consolidating the balance sheet and income statement whenever one company acquires a controlling stake in another
- Recognize the key outputs of a merger model

### **Tutorial Overview**

This tutorial describes the basic mechanics of a merger analysis. It examines how analysts prepare the calculations to assess which deals are earnings per share (EPS) accretive and how the deal financing is determined. It also outlines the key steps involved in post-merger balance sheet and income statement consolidation, before concluding with a look at the output analysis that is prepared for the acquiring company in a merger transaction.

Prerequisite Knowledge Corporate Valuation – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 60 mins

### **Tutorial Outline**

Topic 1: Upfront Analysis Purpose of an Upfront Analysis

- Upfront Analysis: Example
  - Offer P/E
  - Earnings Yield
  - EPS Accretion
  - o Cost of Debt
  - Deal Financing
  - Conclusion

Topic 2: Financing a Merger

- Sources & Uses of Funds Statement
- Uses of Funds
- Sources of Funds (Financing a Deal)
  - Cash Purchase
    - o Debt Issuance
      - Debt/EBITDA Multiple
    - Equity Issuance
      - Exchange Ratio

Topic 3: Consolidation Accounting

- Balance Sheet Consolidation
- Income Statement Consolidation

Topic 4: Key Merger Model Outputs

- EPS Accretion/Dilution
- Credit Metrics
- Ownership & Exchange Ratios
- Contribution Analysis
- Return on Investment



# **Corporate Valuation – Trading Comparables**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the key steps required when conducting a trading comparables analysis
- Outline the mechanics of a trading comparables analysis, including determining the comparables universe, inputting the financials from the comparable companies into a trading comps model, and deriving a valuation range

### Tutorial Overview

Comparable company analysis, or trading comparables, is one of two methods that can be used to determine the relative value of a company (the other is transaction comparables, which is based on precedent transactions). This tutorial looks at each stage of comparable company analysis and describes how it is carried out from a practical point of view. It also examines some of the technical difficulties and considerations that analysts have to make when undertaking a trading comps analysis.

Prerequisite Knowledge Corporate Valuation – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 60 mins

### **Tutorial Outline**

Topic 1: Basics of Trading Comparables

- Scenario: Valuing a Coffee Business
  - Steps Involved in Trading Comps
    - Identify the Comparables Universe
    - Input the Financials
    - Derive a Valuation Range

Topic 2: Identifying the Comparables Universe

- Influencing Factors
- How Many Companies?
- Finding the Comparable Companies

Topic 3: Inputting the Financials

- Spreading the Comps
- Equity Value & Enterprise Value
  - Calculating Equity Value
    - Calculating Enterprise Value
    - Valuing the Components of Enterprise Value
- Calculating Profitability Metrics
  - Sourcing the Data
    - Using Data Providers
    - Hand Spreading the Comps
  - Normalizing the Income Statement
    - Tax Adjustments
  - Adjusting the Financials for Comparability
  - Deciding Which Periods to Use

Topic 4: Deriving a Valuation Range

- Analyzing Multiples
- Why Do Some Companies Trade at a Premium or Discount?
  - Financial Reasons
    - o Business Reasons
    - o Market Reasons



# **Corporate Valuation – Transaction Comparables**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the key steps required when performing a transaction comparables analysis
- Recognize the key questions that analysts must answer when determining precedent transactions
- Calculate and analyze deal premiums
- Derive a valuation range

### **Tutorial Overview**

Acquisition comparables analysis, or transaction comparables, is one of two methods that can be used to determine the relative value of a company (the other is trading comparables, which uses the position and performance of other companies to give an indication of the value of a target company). This tutorial describes how analysts decide on the precedent transactions to include in a transaction comps analysis, how they calculate the offer premium and deal price, and which metrics they analyze as part of the valuation.

Prerequisite Knowledge Corporate Valuation – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 60 mins

### **Tutorial Outline**

Topic 1: Basics of Transaction Comparables

- Contextual Example
  - SoftBank's Acquisition of ARM Holdings
  - Steps Involved in a Transaction Comparables Analysis
    - o Determine a Deal List
    - Calculate Deal Premiums
    - Calculate & Analyze Deal Values
    - o Derive a Valuation Range

Topic 2: Determining a Deal List

- Determining the Precedent Transactions
- Key Questions
  - What Is the Reason for the Deal?
  - o Is the Buyer a Financial Buyer or a Strategic Buyer?
  - How Long Ago Were the Comparable Deals Done?
  - How Many Comparable Deals Should Be Included?
  - Are the Precedent Deals Friendly or Hostile Transactions?
- Sources of Information for the Deal

Topic 3: Calculating & Analyzing Deal Premiums

- Why Do Acquirers Pay Premiums on Deals?
  - Synergies
  - Control Premium
- Calculating the Deal Premium
- Which Share Price?

Topic 4: Deriving a Valuation Range

- What is the Deal Value?
  - Calculating the Deal Value
    - o Offer Price Per Share
    - o Number of Shares Outstanding



- Option Proceeds
- Equity Offer Value
- Transaction (Deal) Value
- Implying a Valuation
  - Scenario



# **Fund Administration**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the critical importance of fund accounting and the calculation of a fund's net asset value (NAV)
- Identify key fund administration activities such as middle office risk reporting and profit and loss determination, fund formation, taxation, income processing, company secretarial and governance, and proxy voting
- Identify compliance-related fund administration activities, such as customer due diligence, and ensuring compliance with FATCA, AML, and CFT requirements

### **Tutorial Overview**

Fund administration operations are often outsourced to a specialist, who may or may not be the fund's investment manager or custodian. This tutorial looks at the crucial fund administration activity of fund accounting and valuation, as well as other key fund administration services.

Prerequisite Knowledge Fund Types & Structures

Tutorial Level: Introductory Tutorial Duration: 60 minutes

### **Tutorial Outline**

Topic 1: Fund Accounting & Valuation

- Overview of Fund Accounting
- Mechanics of Fund Accounting
- Accounting Rules
- Corporate Actions
- Trial Balance
- Valuation & Marking to Market
- NAV Calculation
- Scenario: NAV Calculation

### Topic 2: Other Fund Administration Services

- Middle Office Services
- Risk Reporting
- Risk Reporting Tools
- Corporate Secretarial & Governance
- Fund Formation
- Income Processing
- Tax Services
- Proxy Voting
- Proxy Voting: Registration
- Compliance with Common Reporting Standard (CRS)
- Investor Services: KYC/AML
- Outsourcing AML/CFT Activities
- Outsourcing AML/CFT Activities: CDD Documentation
- AML/CFT Due Diligence
- FATCA Compliance



# **Fund Types & Structures**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the features and characteristics of the various funds available to investors
- Recognize the importance of the separation of "funds" and "fund management" when establishing most investment funds

### **Tutorial Overview**

Investment funds control a vast amount of global wealth, but there are many different fund types and structures that investors can choose from. This tutorial examines the main differences between these funds and provides an overview of the funds available in various jurisdictions around the world.

Prerequisite Knowledge Asset Management – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

### **Tutorial Outline**

Topic 1: Main Fund Types & Structures

- What Is an Investment Fund?
- Types of Fund
- Public vs. Private Funds
- Regional Fund Structures: US
- Regional Fund Structures: Europe
- Regional Fund Structures: UK
- Regional Fund Structures: Asia-Pacific
- Globally-Recognized Fund Structures
- Funds of Funds (FOFs)
- Single-Class vs. Multi-Class Funds
- Fund Organizational Structure: Separation of Funds & Fund Management



# **Fund Valuation**

### **Tutorial Description**

Objectives

On completion of this tutorial, you will be able to:

- Identify the role of accounting in the calculation of fund assets, liabilities, capital, income, and expenses
- Recognize the importance of accurate net asset value (NAV) calculations in enabling fund investors to make correct trading decisions
- Identify the main regulatory issues concerning money market funds and NAV calculations

### **Tutorial Overview**

This tutorial looks at how funds account for the different transactions in which they engage, especially buying and selling securities, and how the critical measure of NAV per share is calculated for funds .

Prerequisite Knowledge Fund Administration

Tutorial Level: Introductory Tutorial Duration: 60 minutes

### **Tutorial Outline**

Topic 1: Fund Accounting & the NAV Cycle

- Fund Accounting
- General Ledger Categories
- The Accounting Equation
- Double-Entry Accounting
- NAV Per Share
- NAV Cycle
- Capital Activity
- Expenses
- Variable Expenses
- Fund Expenses: Scenario
- Income: Interest
- Income: Cash Dividends
- Dividends: Effect on the Share Price

Topic 2: NAV Calculation

- Marking to the Market
- Fair Value
- NAV Calculation: Example
- Topic 3: Money Market Funds
  - Constant NAV Funds
  - Distributing vs Accumulating CNAVs
  - Variable NAV
  - Accounting Issues for MMFs
  - US MMF Reform
  - European Money Market Funds Regulation (MMFR)



### **AIFM Directive**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the objective, scope, and key definitions associated with the Alternative Investment Fund Managers Directive (AIFMD)
- Recognize the main requirements that the AIFMD places on alternative investment fund managers

### **Tutorial Overview**

The Alternative Investment Fund Managers Directive (AIFMD) was introduced in response to calls for greater regulation of hedge funds, private equity funds, and other alternative investment funds (AIFs). Driven by the events of the financial crisis and the Madoff investment fund scandal, the AIFMD represented the most radical reshaping of fund management regulation in Europe since the first UCITS directive in 1985.

This tutorial describes the main provisions of the AIFMD, including (among others) the requirements in relation to authorization, remuneration, risk management, liquidity management, securitization positions, valuation, delegation, and depositaries.

Prerequisite Knowledge None

Tutorial Level: Introductory Tutorial Duration: 75 minutes

### **Tutorial Outline**

Topic 1: Overview of the AIFM Directive

- Overview
- Key Definitions
- Scope
- Managing an AIF
- Marketing an AIF: The Passport Regime
- Marketing an AIF: Professional vs. Retail
- Marketing an AIF: Exemptions

**Topic 2: Key Requirements** 

- Authorization
- Capital Requirements
- Operating Conditions
- General Principles
- Remuneration
- Conflicts of Interest
- Risk Management
- Liquidity Management
- Investment in Securitization Positions
- Organizational Requirements
- Valuation
- Valuation: External Valuation
- Valuation: Self-Valuation
- Delegation
- Delegation: Letter-Box Entities
- Depositaries
- Transparency



# **Blockchain Structure & Security**

### Description

#### Overview

This tutorial develops the model first introduced in the tutorial "Bitcoin & Blockchain" by relaxing assumptions made previously to see how the blockchain system really works. It outlines the key challenges involved in building a distributed database, namely transaction authorization and network consensus. The tutorial describes how public key cryptography is one potential solution to the authorization problem and how bitcoin's proof of work functions as a consensus algorithm.

Prerequisite Knowledge Bitcoin & Blockchain

Level: Intermediate Duration: 30 minutes

## **Smart Contracts & Blockchain Applications**

#### Description

Overview

This tutorial introduces the concept of smart contracts and their use on the blockchain. It also looks at how to build a blockchain product and outlines some of the many potential applications of blockchain, particularly in relation to the financial sector.

Prerequisite Knowledge Blockchain Structure & Security

Level: Intermediate Duration: 25 minutes

### **Cryptocurrencies & Initial Coin Offerings (ICOs)**

### Description

### Overview

Cryptocurrencies have emerged in recent times as a potential new asset class for investors to consider for their portfolios. This tutorial introduces the different types of crypto asset and outlines some of the evolving issues and challenges the asset class is facing. The tutorial also looks at the controversial topic of initial coin offerings (ICOs), the name given to the funding process used by firms in the crypto space and which has attracted a lot of investor attention.

Prerequisite Knowledge Smart Contracts & Blockchain Applications

Level: Intermediate Duration: 25 minutes



# **Data Analytics**

### Description

Overview

Data analytics refers to the qualitative and quantitative techniques used to generate insights from existing data so that productivity can be enhanced. This tutorial provides a high-level overview of the use of data analytics and big data, with particular focus on machine learning techniques that have reinvigorated the field of data science.

Prerequisite Knowledge None

Level: Introductory Duration: 20 minutes

### **Bitcoin & Blockchain**

### Description

Overview

This tutorial provides an overview of bitcoin – the precursor of cryptocurrencies – and, using a board game analogy, explores the fundamentals of blockchain and the difference between a centralized and a decentralized system. While this simplified model does not mirror the inner workings of a blockchain exactly, examining the assumptions used in this process aids understanding of the inherent challenges of decentralized systems and helps to develop an appreciation for the fundamental building blocks of blockchain.

Prerequisite Knowledge None

Level: Introductory Duration: 20 minutes

# **Enterprise Resource Planning (ERP)**

### Description

Overview

ERP is business process management software that enables a company to use a system of integrated applications to automate many functions and manage its business. This tutorial introduces the concept of an ERP platform, including its benefits and implementation challenges. The tutorial also outlines how ERP banking transformation programs are a key focus area for many corporates, with some specific examples provided in relation to cash management processes.

Prerequisite Knowledge None

Level: Introductory Duration: 25 minutes



# **Robotic Process Automation (RPA)**

### Description

#### Overview

Robotic process automation (RPA) refers to the use of software to replicate process steps that are typically performed by humans. This tutorial provides a high-level overview of RPA, including its benefits and limitations, particularly in the context of the financial industry. The tutorial also outlines how concepts such as machine learning and artificial intelligence are expected to enable the next stage of automation after RPA.

Prerequisite Knowledge None

Level: Introductory Duration: 15 minutes

### **Artifical Intelligence (AI)**

#### Description

Overview

Artificial intelligence (AI) refers broadly to a spectrum of technologies and research that aim to improve the cognitive capabilities of machines and software. This tutorial provides a high-level overview of AI, including the different types of AI and the drivers of growth, particularly in the context of the financial industry. The tutorial also outlines how future breakthroughs in AI are expected to expand its current narrow applications, allowing AI algorithms to broaden in scope and interact actively across every aspect of human life.

Prerequisite Knowledge Robotic Process Automation (RPA)

Level: Introductory Duration: 15 minutes

### **Robo-Advice**

### Description

#### Overview

Robo-advisors are challenging the incumbent model of human advisors by automating the investment process through algorithms, allowing these advisors to offer wealth management services that are cheaper, faster, more convenient, and more accessible. This tutorial provides a high-level overview of robo-advice, including its growth factors and key features. The tutorial also outlines the developments that are likely to drive the growth of the robo-advisory model in the future.

Prerequisite Knowledge Robotic Process Automation (RPA)

Level: Introductory Duration: 15 minutes



# **Convexity Analysis**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the importance of convexity in approximating the change in bond price that isn't explained by duration
- Identify the different types of convexity
- Calculate the convexity number for a fixed income portfolio

### **Tutorial Overview**

Convexity helps to approximate the change in the price of a bond that is not explained by duration. This tutorial shows how convexity is calculated for a single security or a fixed income portfolio. The different types of portfolio, such as positive and negative duration, approximate portfolio, and effective duration are also discussed in detail.

Prerequisite Knowledge Duration Analysis

Tutorial Level: Intermediate Tutorial Duration: 50 minutes

### **Tutorial Outline**

Topic 1: Overview of Convexity

- What Is Convexity?
- Duration & Taylor Series
- Convexity Formula
- Scenario: Convexity of a Bond
- Factors Influencing Convexity

Topic 2: Types of Convexity

- Positive Convexity
- Negative Convexity
- Approximate Convexity
- Effective Convexity
- Spread Convexity

Topic 3: Portfolio Convexity

- Overview of Portfolio Convexity
- Mixing Convexity & Duration: Example
- Bullets & Barbells
- Bullets & Barbells (cont'd)
- Beyond Convexity



# **Duration Analysis**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- · Recall how bond prices are sensitive to movements in yield
- Calculate the Macaulay duration and modified duration on a bond
- Identify adjustments to duration numbers to account for convexity
- Recognize how duration can be used to hedge and immunize a single bond or bond portfolio
- Identify rate sensitivity numbers for other types of fixed income instrument such as floating rate notes, swaps, and inflation-linked securities.

### **Tutorial Overview**

Duration is a measure of the sensitivity of bond prices to changes in yield. This tutorial looks at the key types of duration figure, including Macaulay duration, modified duration, money duration, and spread duration. It also examines the use of duration in hedging and immunizing fixed income portfolios as well as looking at rate sensitivity measures for other types of fixed rate instrument such as floating rate notes, swaps, inflation-linked bonds.

Prerequisite Knowledge Fixed Income Analysis – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 75 minutes

### **Tutorial Outline**

Topic 1: Bond Interest Rate Sensitivity

- Bond Interest Rate Sensitivity
- The Sensitivity of Bond Prices

Topic 2: Macaulay Duration

- Macaulay Duration
- What Is Macaulay Duration?
- Macaulay Duration: Balancing Point
- Calculating Macaulay Duration Between Coupon Dates
- Macaulay Duration: Formula
- Factors Affecting Macaulay Duration

Topic 3: Modified Duration

- Modified Duration
- What Is Modified Duration?
- Money Duration (Risk)
- Convexity & Approximate Duration
- Duration of a Portfolio
- Curve Duration
- Curve Duration: Options
- Key Rate Duration (KRD)

Topic 4: Duration Hedging & Immunization

- Duration Hedging & Immunization
- Duration-Based Hedging
- Duration-Based Hedging: Issues
- Immunization
- Immunization of a Bond Portfolio

Topic 5: Other Sensitivities

• Other Sensitivities



- Floating Rate Notes (FRNs) FRN: Rate Sensitivity ٠
- •
- Interest Rate Swap (IRS) Spread Duration •
- •
- Inflation-Linked Bonds (ILBs) •



# **Zero-Coupon Securities**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the key features of zero-coupon bonds and how they are priced
- Identify the different issuers and investors in zero-coupon bonds and the benefits and risks they face with these securities
- List the key variants of zero-coupon bonds

### **Tutorial Overview**

Zero-coupon bonds are securities that are issued at a deep discount to par and pay no interim interest before maturity. This tutorial looks at the key features of these instruments, how they are priced and traded, the main issuers and investors in these instruments, and their key variants.

Prerequisite Knowledge Yield Curves – An Introduction

Tutorial Level: Intermediate Duration: 45 minutes

### **Tutorial Outline**

Topic 1: Overview of Zero-Coupon Securities

- What Is a Zero-Coupon Bond?
- Decomposing Coupon Bonds into Zeros
- Decomposing Coupon Bonds into Zeros: Example
- Pricing a Zero-Coupon Bond
- Benefits of Zero-Coupon Bonds for Issuers & Investors

Topic 2: Risks of Zero-Coupon Securities

- Interest Rate Risk
- Credit Risk
- Scenario: Investing in Zero-Coupon Bonds

### Topic 3: Zero-Coupon Bond Issuers & Structures

- Zero-Coupon Government Bonds
- Zero-Coupon Government Bonds: US Market
- Zero-Coupon Government Bonds: Non-US Markets
- Corporate & Municipal Zero-Coupon Bonds
- Corporate & Municipal Zero-Coupon Bonds: Structures



## **Business of Insurance**

### **Tutorial Description**

### Objectives

On completion of this tutorial, you will be able to:

- Identify the principles of insurance contracts and the organizational structures of insurance companies
- Recognize the major business lines of insurance companies and the challenges facing those companies
- Identify the key insurance company performance metrics

### **Tutorial Overview**

Many people by their nature are risk averse. They would prefer to pay a premium for someone to absorb the risk for them. The insurance industry in return for a fee offer protection to individuals and businesses against potentially ruinous risk. This tutorial looks at the different risks that insurance companies cover and the challenges they face in insuring these risks on behalf of individuals and businesses.

Prerequisite Knowledge No prior knowledge is assumed for this tutorial.

Tutorial Level: Introductory Tutorial Duration: 60 minutes

### **Tutorial Outline**

Topic 1: Overview of Insurance

- What is Insurance?
- Principles of Insurance
- Forms of Organization
- Distribution
- Agents
- How Agents Can Differ to Brokers
- Underwriting
- Moral Hazard
- Adverse Selection
- Pricing
- Claims
- Reinsurance
- Regulation
- Regulation: US
- Regulation: Europe & Beyond
- Conduct of Business
- Conduct Risk
- Impact of Digitalization

### Topic 2: Major Lines of Business

- Life vs. Nonlife Insurance
- Life Insurance
- Hybrid Life Policies
- Life Insurance Underwriting
- Annuity Contracts
- Health Insurance
- Nonlife Insurance
- Property Insurance
- Liability Insurance

Topic 3: Risk Management & Performance



- Insurance Company Stakeholders
- Reporting & Performance Metrics
- Performance Ratios
- Asset-Liability Management (ALM)



# **Operational Risk – Measurement & Reporting**

### **Tutorial Description**

Objectives

On completion of this tutorial, you will be able to:

- Identify the key issues associated with the measurement of operational risk
- Calculate regulatory capital for operational risk
- Recognize the importance of operational risk reporting and the different types of report that banks produce

### **Tutorial Overview**

While some risks lend themselves naturally to quantitative measurement, it is not always clear whether operational risk exposures can be captured successfully using numerical methods. This tutorial looks at the various measures used to quantify operational risk, the challenges and issues associated with the measurement of operational risk, and the reporting of such measures.

Prerequisite Knowledge Operational Risk – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 60 minutes

### **Tutorial Outline**

Topic 1: Measuring Operational Risk

- Objective vs. Subjective Measures of Operational Risk
- Issues with Objective & Subjective Measures
- Collating Loss Data
- Internal vs. External Loss Data
- Issues in Collating Loss Data
- Operational Risk Measures & Risk Assessment
- Inherent (Gross) Risk vs. Residual (Net) Risk
- Other Issues with Operational Risk Measures

Topic 2: Capital Calculations for Operational Risk

- Basic Indicator Approach (BIA)
- The Standardized Approach (TSA)
- Alternative Standardized Approach (ASA)
- Advanced Measurement Approach (AMA)
- Advantages & Disadvantages of the Various Basel Approaches
- The Need for a New Approach
- Standardized Measurement Approach (SMA)
- SMA: Calculating the Capital Charge
- SMA: Implications
- SMA: Other Points to Note

Topic 3: Reporting Operational Risk

- Purpose of Operational Risk Reporting
- Target Audience
- Contents of Risk Reports
- RAG Status Reports
- Risk Assessment Reports
- Loss Data Reporting
- Pillar 3 Disclosures
- Reporting Challenges & Other Issues



# **Option Valuation – An Introduction**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize how the type and width of an option's payoff distribution affects its valuation
- Recall how to value an option using techniques such as binomial expansion, the Black-Scholes formula, and Monte Carlo simulation

#### **Tutorial Overview**

This tutorial looks at the key inputs into option valuation and the different techniques, such as binomial expansion, Black-Scholes, and Monte Carlo techniques that are used to value options.

Prerequisite Knowledge Derivatives – An Introduction

Tutorial Level: Introductory Tutorial Duration: 45 minutes

### **Tutorial Outline**

Topic 1: Basics of Option Valuation

- Binary, Discrete, & Continuous Outcomes
- Volatility
- Risk Neutrality & Discounting
- Discounting & Funding Curves
- Option Pricing vs. Valuation

Topic 2: Option Pricing Techniques

- Pricing Options
- Binomial Techniques
- Numerical Processes
- Simulation Techniques
- Simulation Techniques: Valuation



## **Option Valuation – Black-Scholes-Merton**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the core elements of the Black-Scholes equation
- Recognize how the cost of replicating an option outcome can be used to determine the fair value of the option

## **Tutorial Overview**

This tutorial looks at how the Black-Scholes equation for a call option can be broken down into the option delta times the stock price and the present value of the exercise price. The replicating portfolio approach to determining the fair value of an option is also examined in detail.

Prerequisite Knowledge Option Valuation – An Introduction

Tutorial Level: Advanced Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 1: The Black-Scholes Model & Merton Validation

- The Black-Scholes Model
- Background to Black-Scholes
- Black-Scholes Formula
- Merton Validation
- Black Scholes & Volatility

Topic 2: Black-Scholes & The Replicating Portfolio

- Black-Scholes Model: Replication of Outcomes
- Black-Scholes & The Replicating Portfolio: Price Nodes
- The Replicating Portfolio: Borrowing
- The Replicating Portfolio: Option Valuation
- The Replicating Portfolio: Solving for the Borrowing Amount & Delta
- The Replicating Portfolio: Option Value
- Option Valuation & The Replicating Portfolio in Excel
- Option Valuation & The Replicating Portfolio in Excel: Example
- Excel Approximation



## **Option Valuation – Future Asset Prices & Volatility**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- List the different types of volatility and recall the process for calculating volatility in Excel
- Recognize the difference between asset prices and returns, and between normal and lognormal distributions
- Identify the different types of volatility pattern, including the volatility smile and volatility surface
- Recognize the importance of the term structure of volatility and its different shapes

## **Tutorial Overview**

Volatility is a key input in the correct valuation of options. This tutorial looks at how volatility is calculated in Excel and issues such as fat tails, heteroscedasticity, and skew that affect its correct calculation. The different types of volatility shapes, such as the volatility surface and volatility smile, and the term structure of volatility are also examined in detail.

Prerequisite Knowledge Option Valuation – Sensitivities & Outcomes

Tutorial Level: Advanced Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 1: Volatility Terminology & Calculations

- Volatility Terminology
- Calculating Volatility in Excel
- Calculating Implied Volatility in Excel
- Annualization of Daily Standard Deviation

Topic 2: Asset Returns & The Normal Distribution

- Assumption of Normal Distribution of Asset Returns
- Random Walk vs. Mean Reversion

**Topic 3: Volatility Patterns** 

- Volatility Smile/Volatility Smirk
- Volatility Smile: Explanation

Topic 4: Term Structure of Volatility

- Volatility Term Structure
- Steep & Flat Term Structure
- Inverted Term Structure
- Short-Term vs. Long-Term Implied Volatility
- Volatility Surface



# **Option Valuation – Key Concepts**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recall how options that are in the money at expiration are automatically exercised while those that are out of the money lapse
- List the key inputs into option pricing, including the underlying stock price, the strike, time, volatility, risk-free rate, and dividends (or other asset income)
- Recognize the difference between realized volatility, implied volatility, and expected volatility
- Identify the main option pricing sensitivities, including delta, gamma, and theta
- Recognize the importance of put-call parity in identifying option arbitrage opportunities

## **Tutorial Overview**

There are a number of key inputs into the valuation of options with many of these inputs also having an associated price sensitivity. This tutorial looks at these inputs and sensitivity measures and also looks at the importance of put-call parity in exploiting potential option mispricings through arbitrage.

Prerequisite Knowledge Option Valuation – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 45 minutes

## **Tutorial Outline**

Topic 1: Options Decision-Making & Outcomes

Random & Not-So-Random Outcomes

Topic 2: Option Pricing Influences: Underlying Price & Strike

- Price of the Underlying Asset
- Measures of Sensitivity: Delta & Gamma
- Delta in Excel



## **Option Valuation – Sensitivities & Outcomes**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize the importance of moneyness and measures of option sensitivity such as delta
- Identify how forward prices are connected to option prices and how forwards are priced in Excel

#### Tutorial Overview

This tutorial looks at the basic dynamics of option values, exploring the relationship between option prices and forward prices, the concept of option moneyness, and the breakdown of option prices into time value and intrinsic value.

Prerequisite Knowledge Option Valuation – An Introduction

Tutorial Level: Advanced Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 1: Moneyness

- Moneyness
- The Moneyness of an Option
- Moneyness: Features
- Moneyness & Option Price Sensitivity
- Delta: Example
- Intrinsic Value & Time Value

Topic 2: Option Pricing & Forwards

- Paying for an Asymmetrical Risk Exposure
- Option Pricing Using the Normal Distribution
- Forward Prices & Options
- Forward Prices & Options: Example
- Forward Pricing of a Dividend-Paying Stock

Topic 3: Option Pricing Influences: Time & Volatility

- Time
- Volatility
- Changes in Volatility & Time: Excel
- Volatility: Key Features
- Types of Option Volatility

Topic 4: Option Pricing Inputs & Sensitivities

• Other Key Inputs & Sensitivities in Options

## Topic 5: Put-Call Parity

- What Is Put-Call Parity?
- Put-Call Parity: Application
- Put-Call Parity in Excel

Scenario: Put-Call Parity



## **Portfolio Management – Passive vs. Active Strategies**

## **Tutorial Description**

Objectives

On completion of this tutorial, you will be able to:

- Identify the types and features of passive portfolio management
- Recognize the techniques used in active portfolio management
- Identify the investment strategies that are blurring the lines between passive and active portfolio management approaches

## **Tutorial Overview**

A portfolio's objective is dependent upon an investor's future cash flow requirements and their tolerance for risk. Whatever the objective, there are two basic strategies to choose from – passive or active. This tutorial starts by taking a detailed look at indexing, a strategy adopted by the passive management community. We then move on to discuss the market timing mentality of active portfolio managers. We conclude by examining alternative approaches that are blurring the traditional distinctions.

Prerequisite Knowledge Investment – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 1: Passive Portfolio Management

- Passive Management Defined
- Types of Passive Strategy
- Index Fund Construction
- Exchange Traded Funds (ETFs)
- Benefits of Indexing
- Drawbacks of Indexing

Topic 2: Active Portfolio Management

- Active Management Defined
- Asset Allocation
- Security Analysis & Selection
- Market Timing
- Market Timing: Beating Market Returns
- Fundamental Analysis
- Technical Analysis
- Quantitative Analysis

Topic 3: Variations on Active/Passive Management

- The Active/Passive Spectrum
- Smart Beta
- Smart Beta vs. Traditional Beta
- Factor-Based Investing
- Focus Investing
- Questions of Definition



## Financial Markets – An Introduction

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Distinguish between the broad categories of financial markets investment/funding markets, transactional markets, and risk management markets and their purpose
- Identify the key participants in these financial markets and the roles they play
- Recognize the difference between exchange-traded and off-exchange/OTC markets, and how the distinction between the two is becoming increasingly blurred

## **Tutorial Overview**

This tutorial introduces the major financial markets. What are their functions? Who needs them? What products do they offer? Where are they? How do they operate? How are they changing?

Broadly speaking, the tutorial outlines the financial markets' defining characteristics, focusing on the way in which money shifts between participants. More specifically, it describes the types of financial market, the products offered, the people/participants involved, and the different types of marketplace.

Prerequisite Knowledge No prior knowledge is assumed for this tutorial.

Tutorial Level: Introductory Tutorial Duration: 75 minutes

## **Tutorial Outline**

Topic 1: Overview of Financial Markets

- What is a Financial Market?
- Size of Global Financial Markets
- Impact of the Global Financial Crisis
- Types of Financial Market
  - Funding/Investment Markets
    - Long-Term vs. Short-Term Funding
    - Debt vs. Equity Funding
    - Equity
    - Debt
    - Short-Term Debt
    - Primary & Secondary Markets
    - Capital Structure
    - Funding Breakdown
  - Transactional Finance
    - Foreign Exchange
    - Trade Finance
    - Commodities
  - o Risk Management
    - Insurance
    - Derivatives

## Topic 2: Market Participants

- Key Market Players
  - o Banks ُ
    - Shadow Banking
  - o Institutional Investors
  - Corporates
  - $\circ$  Individuals
  - o Governments/Sovereigns
  - Regulators



Marketplaces

- The Importance of Liquidity
- Exchange Trading
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- OTC Trading Exchange Trading vs OTC Trading: Blurred Lines •
- Public vs. Private Markets
- **Financial Centers** •



# **US Equity Market**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Describe how decimalization in 2000 paved the way for the growth in electronic and automated trading
- Understand how subsequent regulation, namely Regulation NMS, aimed at curbing such activity has changed the market structure
- Describe how a number of high-profile events have negatively affected the market
- Outline how regulators have responded to such events in order to stem the decline in investor confidence
- Explain how primary markets function as a means for corporations to raise funding in the US, and the intense competition between exchanges for IPO business
- Describe how the traditional floor-based trading model has changed with the growth of electronic trading and the emergence of off-exchange venues such as dark pools

## **Tutorial Overview**

The US is by some distance the largest equity market in the world, with two of its exchanges (NYSE Euronext and NASDAQ OMX) leading all others in terms of both market capitalization and turnover. But it is also a very fragmented market. As technology continues to advance, traditional methods of corporate fund raising and ways of accessing and trading equity markets are becoming a distant memory. Old-style floor-based trading on physical exchanges has been overtaken by electronic trading venues and non-traditional exchanges that provide enhanced price discovery and increased market liquidity. The result is a highly fragmented marketplace with fierce competition among the major players.

This tutorial describes the key events – technological, regulatory, or otherwise – that have shaped the current structure of the US equity market and the operations of traders and trading venues within that structure.

Prerequisite Knowledge Equity Markets – An Introduction

Tutorial Level: Introductory Tutorial Duration: 75 mins

## **Tutorial Outline**

Topic 1: Market Structure & Reform

- Size & Scale
- Market Structure
  - Impact of Decimalization
  - Impact of Regulation NMS
  - Growth of High Frequency Trading (HFT)
  - Emergence of Dark Liquidity
- Market Disruptions and Failures
  - o Flash Crash
  - Facebook IPO
  - Knight Capital Group's Trading Loss
  - Problems on the BATS Exchanges
- Regulatory Reforms
  - o Large Trader Reporting
  - Extraordinary Volatility
    - Limit-Up-Limit-Down (LULD)
    - Market-Wide Circuit Breakers
  - Consolidated Audit Trail (CAT)
  - Systems Compliance and Integrity

Topic 2: Primary Market Issuing



- What is a Primary Market?
  - Initial Public Offerings (IPOs)
  - Seasoned Offerings
- Issuing Process

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- SEC Registration
  - Regulation D
    - Rule 504
      - Rule 505
    - Rule 506
- Competition for New Issues
  - NYSE vs. NASDAQ
  - Listing Requirements

Topic 3: Secondary Market Trading

- National Securities Exchanges
  - NYSE Euronext

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- NYSE
- NYSE MKT
- NYSE Arca
- o ArcaEdge
- NYSE Market Model
- NASDAQ QMX
  - NASDAQ Stock Market (NASDAQ)
  - NASDAQ QMX PSX
- OTC Markets
- Dark Liquidity Providers



# Hong Kong Equity Market

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- List the stock exchanges, market regulators, stock indexes, and types of security in the Hong Kong market
- Describe the listing, trading, and settlement procedures for equities in Hong Kong

## **Tutorial Overview**

Hong Kong is seen as the gateway to Mainland China; a commercial dynamo, strategically located in a region renowned for high levels of growth, and with close trading and business links to the rest of the Asian region. The Hong Kong equity market is an important source of capital for local companies and increasingly for companies incorporated in the People's Republic of China (PRC), with the result that it has managed to attract a significant amount of investment interest from overseas. This tutorial provides a detailed introduction to the various aspects of equity securities traded in Hong Kong, including the history and development of the market, the different securities traded and trading locations, leading stock indexes, listing requirements and procedures, and trading operations.

Prerequisite Knowledge Equity Markets – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 mins

## **Tutorial Outline**

Topic 1: Market Overview

History

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- Market Capitalization
  - Hong Kong Markets
    - Main Board
      - Growth Enterprise Market (GEM)
    - Securities Traded
      - Red Chips
      - H Shares
      - o A Shares & B Shares

Topic 2: Listing, Trading, & Settlement Procedures

- Listing Sponsors
- Listing Timeline
- Listing Requirements
- Trading Operations Trading Hours
- Trading Procedures
- Trading Systems
- Trading Rules
- Trading Lot & Minimum Bid Size
- Charges, Fees & Taxes
- Clearing & Settlement



# Swaps – An Introduction

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the key characteristics of swap contracts
- Compare the main types of swap
- Recognize the scale and spread of the major swap markets
- Recall how the largest market, the interest rate swap (IRS) market, operates and how it and other swap markets have been affected by regulatory change

## **Tutorial Overview**

originating in the 1970s, swaps were once small, heavily structured, transactions. Today, they have developed into commoditized products that dominate derivatives markets around the globe.

This tutorial outlines the basic structure of a swap and the different swap types. It also describes how market participants can use swaps to transform existing asset or liability positions, or speculate on underlying market movements. Finally, the significant changes in the regulatory environment, particularly as regards clearing and trading, are discussed.

Prerequisite Knowledge Derivatives – Markets

Tutorial Level: Introductory Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 1: Basics of Swaps

- Swaps: An Overview
- Swaps: Pricing
- Notional Principal

Topic 2: Swap Types

- Vanilla Swaps with Slight Adjustments
- Basis Swaps
- Cross-Currency Swaps
- Equity, Commodity, and Index Swaps
- Credit Derivatives
- Diff (Quanto) Swaps

Topic 3: Markets Overview

- Comparative Advantage in Borrowing
- How Swaps Benefit Those with a Comparative Advantage
- Intermediation
- Key Players
- What Is the Price?
- Differing Standards
- Documentation
- Counterparty Credit Risk
- Collateral
- Compression
- G20 Commitments
- Legislative Changes
- OTC or Exchange-Traded?



# Forwards & Futures – Hedging (Part I)

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Explain how futures contracts and forward trades are used to hedge an existing or anticipated asset position
- Compare and contrast hedging using futures with hedging using forwards
- Outline some of the different hedging approaches used in different markets

## **Tutorial Overview**

The elimination of future price risk lies at the heart of derivatives, whether in the form of forward trades or futures contracts. This tutorial explains the basic principle behind hedging using 'prices in the future' and shows how this principle is applied across many markets. It also outlines the differences between, and relative attractions of, using either futures contracts or OTC forwards when hedging a position. The additional difficulties of hedging interest rate risk are covered in a subsequent tutorial.

Prerequisite Knowledge Future Markets

Tutorial Level: Intermediate Tutorial Duration: 60 mins

## **Tutorial Outline**

**Topic 1: Simple Hedges** 

- Symmetrical Risks
- Hedging Using Futures

Topic 2: Futures or Forwards

- All Things are not Equal
- Changes in the Basis
- Range of Contracts for Hedging
- Futures vs. Forwards

Topic 3: Hedging Other Major Assets

- Equity Portfolio Hedging
- Foreign Exchange Hedging



# Forwards & Futures – Hedging (Part II)

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- · Identify the different long-term interest rate risks faced by market participants
- Explain how long-term interest rate risks can be managed, particularly through hedging using bond and swap futures
- Identify the different short-term interest rate related risks faced by market participants, and explain how these risks can be managed, either through OTC FRA transactions or through the use of money market futures contracts

#### **Tutorial Overview**

The use of futures hedging for both short and long-term interest rate risks is extremely widespread. Of the five most liquid exchange-traded contracts in the world, the most actively traded futures contract was the Eurodollar contract quoted on the CME.

This tutorial focuses on the hedging of interest rate risk, both for shorter-dated and longer-dated instruments. It examines the construction of hedges using bond and money market futures, and outlines some of the particular issues unique to these markets.

Prerequisite Knowledge Forwards & Futures – Hedging (Part I)

Tutorial Level: Intermediate Tutorial Duration: 75 mins

## **Tutorial Outline**

Topic 1: Bond Futures

- A Typical Bond Futures Contract
- Conversion Factors (CFs)
- Cheapest-to-Deliver Bond

Topic 2: Hedging Using Futures

- Hedging with Bond Futures
- Regression Hedging
- Hedging a Swap Position
- Bond/Swap Basis Risk
- Swap Futures

Topic 3: Short-Term Hedging

- Forward Rate Agreements (FRAs)
- Money Market Futures
- Strips & Stacks
- Convexity Adjustment



## **Securitization – Asset-Backed Securities (ABS)**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Explain how the securitization technique has extended beyond its roots in the US residential mortgage market
- Describe the various asset-independent structures of securitization
- Identify the key factors in a securitization that are examined by investors, rating agencies, or other analysts
- Explain how measurements of value have evolved beyond simple fixed interest paradigms

## **Tutorial Overview**

Although the residential mortgage-backed securities (RMBS) market accounts for the majority of securitized transactions, the basic securitization technique is asset-independent. This tutorial looks at how securitization has evolved to face the challenges presented by different asset classes. In addition to descriptions of some of the major classes outside of RMBS, the tutorial also examines how the markets for the associated securities operate and how valuation techniques have been developed to cope with the idiosyncrasies associated with securitization.

Prerequisite Knowledge Securitization - An Introduction Securitization - Mortgage-Backed Securities (MBS)

Tutorial Level: Intermediate Tutorial Duration: 120 mins

## **Tutorial Outline**

Topic 1: Overview of the ABS Market

- From Computers to Credit Cards
- Typical Assets
  - Commercial Mortgages
  - Credit Card Receivables
  - Auto Loans
  - o Student Loans
  - Home Equity Loans (HELs)

Topic 2: Asset-Independent Structures

- Future Flows
  - Collateralized Debt Obligations (CDOs)
  - Collateralized Loan Obligations (CLOs)
- Synthetics
- Asset-Backed Commercial Paper (ABCP)

**Topic 3: Key Factors** 

- Underlying Asset Quality
- Simulations & Monitoring
- Third Parties
- Structure of Deal Reflecting
- Structure of Assets



## **Cash Management**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Define 'cash' and explain why firms hold cash
- Describe the mechanisms firms use to disburse and collect cash
- Calculate the target cash balance
- List the major money market instruments and their features

## **Tutorial Overview**

It is essential to the profitability of a business that it manages its cash efficiently and cost-effectively. This tutorial explains the process of cash collection and disbursement and shows how a firm can determine the cash balance that will minimize opportunity costs and trading costs. The use of money market instruments in cash management is also explored.

Prerequisite Knowledge Corporate Finance - An Introduction

Tutorial Level: Introductory Tutorial Duration: 75 mins

## Tutorial Outline

Topic 1: Cash Collection and Disbursement

- Collection Process
- Disbursement Process

Topic 2: Cash Management

- Transactions
- Compensating Balances

Topic 3: Determining the Adequate Cash Balance

- Baumol Model
- Miller-Orr Model

## Topic 4: Cash Management and the Money Market

- Treasury Bills
- Certificates of Deposit (CDs)
- Commercial Paper (CP)
- Repurchase Agreements (Repos)
- Money Market Funds



## **Credit Management**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Explain the fundamentals of credit management
- Calculate the relevant ratios to determine the viability of a proposal
- Outline the procedures involved in the credit control process

## **Tutorial Overview**

Firms that plan to offer credit terms to customers need to address the issues such as assessing credit worthiness, trade terms, credit period, collecting payments etc., before the credit decision can be made. These issues will be discussed in this tutorial.

Prerequisite Knowledge Corporate Finance — An Introduction

Tutorial Level: Introductory Tutorial Duration: 65 mins

## **Tutorial Outline**

Topic 1: Terms of Sale

- Early Settlement
- Payment Options

Topic 2: Credit Agreements

- Bankers' Acceptance
- Commercial Draft
- Conditional Sales Contract
- Promissory Note
- Open Account

Topic 3: Credit Analysis

- Sales Growth Profitability Ratios
- Liquidity Ratios
- Efficiency Ratios
- Solvency Ratios

Topic 4: The Credit Decision

- Criteria for Making a Credit Decision
  - The Five Cs of Credit
  - CAMPARI
- Credit Limits

**Topic 5: Collection Policy** 

- Average Collection Period
- Late Payments



# **Financial Planning**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Explain what financial planning is
- Identify the main components of a typical financial plan
- Explain the role of modelling in financial planning

## **Tutorial Overview**

Financial planning is vital for every firm because:

It outlines the firm's goals and provides benchmarks against which future performance can be measured

It identifies the interaction between the firm's investment and financing decisions

It enables the firm to cope with changing business conditions. This tutorial outlines the financial planning process and shows how models can be used to forecast a firm's future financial performance.

Prerequisite Knowledge Corporate Finance - An Introduction

Tutorial Level: Introductory Tutorial Duration: 100 mins

## **Tutorial Outline**

Topic 1: What is Financial Planning?

- Analysing the financial and investment choices open to the firm
- Projecting future consequences of present decisions
- Deciding which alternatives to undertake
- Measuring subsequent performance against goals set
- Length of Plan
  - Short term
    - o Long term

Topic 2: Components of a Financial Plan

- Sales forecast
- Pro forma financial statements
- Capital expenditure
- Financing
- Economic Assumptions

Topic 3: Forecasting

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- Economic Stability
- Industry Dynamics
- Income Statement Items
- Balance Sheet Items

Topic 4: Uses of Models in Financial Planning

- **Financial Plans** 
  - Inputs
    - o Planning Model
  - Outputs
- Sensitivity Analysis
  - Sales
  - o Gross Profit Margin
  - o Inventory period
  - o Accounts receivable paid
  - o Accounts payable period



# **Corporate Finance – Acquisition Analysis**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Outline the reasons why a company may want to engage in an acquisition
- Quantify an acquisition using a free cash flow (FCF) approach
- Quantify an acquisition using an economic profit approach, and recognize how both economic profit and FCF yield the same answer with respect to acquisition valuation

The most important element in any acquisition process is the expected synergies to be realized through the acquisition. The more synergies that can be reasonably expected, the higher the price an acquirer will be willing to pay for the company to be acquired.

This tutorial looks at the importance of synergy in determining the ultimate value of an acquisition. It describes how acquisitions can be quantified and valued using a free cash flow or an economic profit approach. In both cases, synergy is discussed as the primary driver of value in the analysis of acquisition candidates, and the need to quantify the synergies properly is addressed.

Prerequisite Knowledge Mergers & Acquisitions Corporate Finance – Measuring Business Performance – Free Cash Flow Corporate Finance – Measuring Business Performance – Economic Profit

Tutorial Level: Intermediate Tutorial Duration: 75 mins

## **Tutorial Outline**

Topic 1: Fundamentals of Acquisition

- Reasons to Acquire Companies
- Reasons to not Acquire Companies
- Historical Perspective on Acquisitions
  - o 1960s-1970s
  - o **1980s**
  - o Recent Years

Topic 2: Quantifying the Value of an Acquisition – FCF Approach

- FCF Acquisition Analysis Basic Tasks
- FCF Acquisition Analysis
- FCF Acquisition Analysis Alternative View
- Synergy Quantification
- The Premium Price
- Acquisition Analysis
  - Step 1: Analysis of Value Received
  - Analysis of Value Received Example
  - Sept 2: Analysis of Purchase Price
  - o Price Parameters
  - Impact of Purchase Price on Free Cash Flow

Topic 3: Quantifying the Value of an Acquisition – Economic Profit Approach

- FCF or Economic Profit?
  - Acquisition Analysis Economic Profit Example
  - o Impact on Purchase Price on Economic Profit
- Conclusion



## Swaps – Currency Swaps

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Describe the basic features and characteristics of currency swaps
- Price different types of currency swaps

## **Tutorial Overview**

Currency swaps were first used in the 1970s. Along with interest rate, equity and commodity swaps, these instruments have changed the face of finance. At the surface level, they have allowed risks to be managed and capital markets accessed in ways that were unimaginable before. At a deeper level, they facilitate the understanding and measurement of risks across enterprises so that those enterprises can operate more effectively.

In this tutorial, we will describe the different types of currency swaps and explain how they are priced.

Prerequisite Knowledge Swaps – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 60 mins

## **Tutorial Outline**

Topic 1: Introduction to Currency Swaps

- Basics of Currency Swaps
- Currency Swaps Example
- Uses of Currency Swaps
- Risks in Currency Swaps

Topic 2: Swaps - Interest Rate Swap Pricing

- Types of Currency Swap
- Fixed-to-Fixed
- Pricing a fixed-to-fixed Currency Swap
- Fixed-to-Floating
- Pricing a fixed-to-floating Currency Swap
- Floating-to-Floating
- Pricing a floating-to-floating Currency Swap



## Swaps – In-Arrears Swaps

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Structure an in-arrears swap
- Price an in-arrears swap
- Identify the three sources of mark-to-market sensitivity for in-arrears swaps
- Explain the hedging of an in-arrears swap
- Calculate the convexity adjustment required for in-arrears swaps
- Target market conditions that make in-arrears swaps an ideal client product

## **Tutorial Overview**

An in-arrears swap is a variation of a traditional interest rate swap. The difference between the two relates to the floating rate payment. With a traditional swap, floating rate payments are based on the level of the reference index at the start of the interest period. With an in-arrears swap, floating rate payments are based on the level of the reference index rate at the end of the interest period.

In-arrears swaps are used to speculate on changes in the shape of the yield curve and are particularly well suited to steep yield curve environments. This tutorial looks at how in-arrears swaps are structured and describes in detail how they are priced. Other topics, such as price sensitivities and hedging, are also covered.

Prerequisite Knowledge Swaps – An Introduction Swaps – Pricing & Valuation (Part I) Swaps – Pricing & Valuation (Part II)

Tutorial Level: Advanced Tutorial Duration: 180 mins

## **Tutorial Outline**

Topic 1: Structure of an In-Arrears Swap

- Reviewing Better Deal Bank's Offers
- Payment Leg 1 Libor Set in Arrears
- Payment Leg 2 Libor Plus Some Spread

Topic 2: Pricing an In-Arrears Swap

- Reviewing Better Deal Bank's Offer
- Calculating the Spread
- Rule of Thumb Method

Topic 3: Pricing Sensitivity

- Reviewing Better Deal Bank's Offer
- Sources of Pricing Sensitivity
- Parallel Shift Sensitivity
- Factor Sensitivity
- Non-Parallel Curve Shifts

Topic 3: Hedging an In-Arrears Swap

- Reviewing the 3-year Euribor In-arrears Swap
- Equivalent Hedge Positions
- How effective is the Hedge?
- How does the Hedge Work?

Topic 4: Favourable Market Conditions

• When should you consider an In-Arrears Swap?



Topic 5: Understanding Convexity Adjustments

- Why do we need a Convexity Adjustment?
- Calculating the Hedge Ratio
- How does this Hedge perform?
- Need for Convexity Adjustments
- Calculating the Convexity Adjustment
- Caplet Volatility
- Volatility and Convexity Adjustments
  - Upper Range Calculations
  - Lower Range Calculations
- Effect of the Convexity Adjustment
- The Convexity Adjustment Formula
- Timing Adjustment



# Swaps – Constant Maturity Swaps

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify opportunities to use constant maturity swaps profitably
- Target market conditions that make constant maturity swaps an ideal client product
- Identify the important sources of mark-to-market sensitivity for constant maturity swaps
- Apply convexity adjustments while pricing constant maturity swaps

## **Tutorial Overview**

Constant maturity swaps (CMS), a variation of interest rate swaps, are relatively new in the derivatives market. The basic CMS structure offers the exchange of two floating rate coupon streams, one based on a par swap rate or government bond yield and the other based on a short-term rate (such as Libor). These instruments are an ideal product for investors looking to take a view on the shape of the implied forward curve.

In this tutorial, we describe the structure of constant maturity swaps and explain how these instruments are priced. Concepts related to their pricing, such as sensitivities and convexity adjustments, are also included.

Prerequisite Knowledge Swaps – An Introduction Swaps – Pricing & Valuation (Part I) Swaps – Pricing & Valuation (Part II)

Tutorial Level: Advanced Tutorial Duration: 120 mins

## **Tutorial Outline**

Topic 1: Structure of a Constant Maturity Swap

- The Three Elements
- Variations to the Interest Rates
- An Alternate View

Topic 2: Pricing a Constant Maturity Swap

- Revisiting the Inference Inc. Deal
- The Forward Spreads
- The CMS Spread Formula
- Inference Inc Deal Calculating the CMS Spread

**Topic 3: Price Sensitivities** 

- Yield Curve Expectations
- Source of Sensitivity
- Parallel Shift Sensitivity
- Non-parallel Curve Shifts
- Factor Sensitivity

Topic 4: Convexity Adjustments

- Need for Convexity Adjustment
- Parameters for Convexity Adjustment
- The Convexity Adjustment Formula



# Swaps – Forward, Amortizing, & Zero-Coupon Swaps

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify opportunities to use the three swaps profitably with clients
- Target market conditions that make the swaps ideal client products
- Identify pricing requirements
- Price the swaps based on market conditions
- Identify all sources of mark-to-market sensitivities

## **Tutorial Overview**

Forward, amortizing and zero-coupon swaps are variations of the traditional interest rate swap structure that are often used in combination with one another. Forward swaps are used to take a view on forward interest rates, amortizing swaps are used to match the underlying principal to an amortizing loan, while zero-coupon swaps are useful if the floating rate receiver has a short-term cash flow deficit. In this tutorial, you will learn how each of these swap types is used, structured and priced.

Prerequisite Knowledge Swaps – An Introduction Swaps – Pricing & Valuation (Part I) Swaps – Pricing & Valuation (Part II)

Tutorial Level: Advanced Tutorial Duration: 180 mins

## **Tutorial Outline**

Topic 1: Forward Swaps

- Price Sensitivities
  - Price Sensitivity to Parallel Curve Shifts
  - Price Sensitivity to Non-parallel Curve Shifts
- Pricing
  - o Present Value of the Floating Leg
  - Solving for the Fixed Coupon

**Topic 2: Amortizing Swaps** 

- Price Sensitivities
  - Price Sensitivity to Parallel Curve Shifts
  - Price Sensitivity to Non-parallel Curve Shifts
- Pricing
  - Present Value of the Floating Leg
  - Solving for the Fixed Coupon

Topic 3: Zero-Coupon Swaps

- Price Sensitivities
  - Price Sensitivity to Parallel Curve Shifts
  - Price Sensitivity to Non-parallel Curve Shifts
- Pricing
  - Present Value of the Floating Leg
  - Solving for the Fixed Coupon



## **Project Finance – An Introduction**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Explain what project finance is and its role in funding large scale projects
- Outline the key players in a project finance deal
- Describe the costs and benefits of project finance for sponsors

## **Tutorial Overview**

Project finance is a financing method used to fund capital-intensive projects, especially those involving power generation, public infrastructure, and extractive industries. It differs from corporate finance deals in that the project is separated from its sponsors who set up a bankruptcy-remote special purpose vehicle (SPV) to hold the project assets.

This tutorial provides a broad overview of the project finance market, showing a typical project finance deal and the main players involved. The costs, benefits, and risks associated with project finance are also described.

Prerequisite Knowledge Corporate Banking Products – Term Finance

Tutorial Level: Introductory Tutorial Duration: 75 mins

## **Tutorial Outline**

Topic 1: Overview of Project Finance

- Key Characteristics of Project Finance deals
- Project Finance Types of Project
- History and Development of Project Finance
- Example of a Project Finance Deal

**Topic 2: Project Finance Participants and Structures** 

- Participants in Project Finance Deal
- Advisors/Consultants
- Arrangers/Lenders
- Contractors
- Suppliers
- Purchasers
- Project Finance Structures
- Costs and Benefits of Project Finance Deals for Sponsors

## Topic 3: Project Risk

- Project Risk
- Pre-Completion Risks
- Post-Completion Risks
- Project Risk All Phases
- Project Risk Management by the Borrower/SPV
- Risk Allocation by the SPV to Project Counterparties



## **Project Finance – Deal Structuring**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Outline the key stages in a project finance deal
- Describe the different forms of project debt

## **Tutorial Overview**

Project finance deals are complex transactions involving a large number of participants. Most project finance is raised through a group of bank lenders, known as a syndicate, who pool their resources to extend credit to the project SPV. This structure enables lenders to share the considerable risk of project finance, which is non-recourse in nature. Some finance deals may also involve a bond issue, which is typically placed and underwritten by a strong, reputable bank with a global outreach. Project sponsors will also contribute funds to a project finance deal in the form of equity or subordinated debt/mezzanine finance.

This tutorial looks at how loans are raised for project finance deals, and outlines the costs and benefits of this approach for borrowers. Other sources of project finance are also described.

Prerequisite Knowledge Project Finance – An Introduction

Tutorial Level: Introductory Tutorial Duration: 90 mins

## **Tutorial Outline**

Topic 1: Stages in a Project Finance Deal

- Advising
  - Preparation of the Project Plan/Financial Model
  - o Determining the Optimal Capital Structure
  - The Optimal Capital Structure for Sponsors
  - Cover Ratios
  - Sensitivity Analysis
  - o Information Memorandum
- Arranging Services
- Syndication
  - Project Loan Negotiation and Structuring
  - o Covenants
  - Events of Default
  - o Representations and Warranties
  - Conditions Precedent
- Financial Close/ Drawdown
- Loan Administration and Monitoring

## Topic 2: Types of Debt

- Equity/Mezzanine Finance
- Project Loan Facilities
- Project Bonds Issuing
- Leasing



# **Exchange-Traded Funds (ETFs) – An Introduction**

Tutorial Description Objectives On completion of this tutorial, you will be able to:

- Recognize the basics of ETFs, including how they are created, traded, and redeemed
- Identify the key features of ETFs that makes them such an attractive investment vehicle for many investors
- Recall the evolution of the ETF market and its development worldwide

## **Tutorial Overview**

This tutorial covers the fundamentals of ETFs, beginning with the unusual way that these securities are constructed (and redeemed) and the key players involved in that process. The tutorial also covers topics such as ETF pricing, trading, investment strategies, and market development. The attractions of ETFs for investors are also described, as well as how they compare with other investment vehicles such as mutual funds.

Prerequisite Knowledge Investment – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 1: Overview of ETFs

- What Is an ETF?
- ETF Creation
  - In-Kind vs. Cash Create Transactions
- Net Asset Value (NAV)
- ETF Redemption
  - Sale of ETF Shares in the Secondary Market
  - Redemption of ETF Creation Units
- ETF Trading
  - Intraday Value
- ETF Applications
- ETFs vs. Mutual Funds
  - Management
    - Pricing & Trading
    - o Fees
    - o Taxation
- Market Development
  - o North America
  - o Europe
  - Asia-Pacific

Topic 2: Features of ETFs

- Diversification
- Liquidity
- Asset Classes
- Costs
  - Operating Expenses (Total Expense Ratio)
  - Bid/Ask Spreads
  - Commissions
- Taxation
  - Investment Strategies
    - Asset Allocation
    - Core & Satellite Strategy



HedgingCash Equitization



# **Corporate Finance – Capital Budgeting**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Use a free cash flow (FCF) analysis to quantify a capital budgeting opportunity
- Use an economic profit approach to quantify a capital budgeting opportunity, and outline the similarities and differences between this approach and the FCF approach
- Calculate the terminal value of a project using two simplified quantitative approaches and a more sophisticated approach
- Describe the various qualitative issues to be addressed when conducting a capital budgeting analysis, and adopt an approach for dealing with 'strategic' investments

## **Tutorial Overview**

One of the most important decisions a company can make is where to invest its scarce capital resources in order to maximize shareholder value. These capital budgeting decisions need to be supported by rigorous analyses that have a firm economic underpinning.

The best way to quantify the costs and benefits of a capital budgeting opportunity is to use either a free cash flow or economic profit approach. The advantage of using these measures is that they both consider the economic flows/cash flows (operating flows and investment flows) associated with capital budgeting, and also take into account the return on investment that is expected by the capital contributors of a company.

This tutorial will provide you with the quantitative tools needed to properly evaluate capital budgeting opportunities for the purpose of maximizing the value of a firm.

## Prerequisite Knowledge

Corporate Finance – Measuring Business Performance – Free Cash Flow Corporate Finance – Measuring Business Performance – Economic Profit NPV & IRR

Tutorial Level: Intermediate Tutorial Duration: 75 mins

## **Tutorial Outline**

Topic 1: Free Cash Flow Approach to Capital Budgeting

- Using FCF to Quantify a Capital Budgeting Opportunity
  - Using FCF for Capital Budgeting Positive NPV
  - Using FCF for Capital Budgeting Zero NPV
  - Using FCF for Capital Budgeting Negative NPV

Topic 2: Economic Profit Approach to Capital Budgeting

- Using Economic Profit to Quantify a Capital Budgeting Opportunity
  - Using Economic Profit for Capital Budgeting Positive NPV
  - Using Economic Profit for Capital Budgeting Zero NPV
  - Using Economic Profit for Capital Budgeting Negative NPV
- Economic Profit Vs FCF Conclusion

Topic 3: Qualitative Issues & Strategic Investments

- Qualitative Issues Surrounding Capital Budgeting Decisions
- Strategic Investments
- Strategic Investments Example

Topic 4: Terminal Value

- Terminal Value Calculation
  - Terminal Value Perpetuity Method
  - Terminal Value Constant Growth Method



- Terminal Value Some Observations
- Terminal Value A more Sophisticated Approach



## **Corporate Governance – An Introduction**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Explain the importance of good corporate governance
- Outline the key issues in corporate governance

## **Tutorial Overview**

Corporate governance is a broad term to describe the rules, processes, and laws by which companies are directed and controlled for the benefit of company shareholders and other stakeholders. Good corporate governance contributes to sustainable economic development by enhancing the performance of companies and improving their access to outside sources of funds.

This tutorial describes the roles and responsibilities of company boards of directors (and their subcommittees) in promoting effective corporate governance. It also looks at some of the key issues, such as director remuneration and institutional investor engagement that are crucial to good corporate governance. Well-known examples of corporate governance failures are also highlighted.

Prerequisite Knowledge No prior knowledge is assumed for this tutorial.

Tutorial Level: Introductory Tutorial Duration: 60 mins

## **Tutorial Outline**

Topic 1: Overview of Corporate Governance

- What is Corporate Governance?
- The Importance of Corporate Governance
  - Agency Theory
  - Stakeholder Theory
- Corporate Governance and Responsibilities of the Board of Directors
- Board of Roles
- Board Committees
- OECD Principles of Corporate Governance
- Corporate Governance Ratings
- Corporate Governance Failings

Topic 2: Key Issues in Corporate Governance

- Key Issues in Corporate Governance
  - Director Remuneration
  - Disclosure, Transparency and Audit
  - o Responsibilities of Institutional Shareholders
  - o Ethical Behaviour in corporates
  - o Corporate Governance and Company Performance



# **Corporate Social Responsibility (CSR) – An Introduction**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Define corporate social responsibility (CSR)
- List some of the business case factors behind the adoption of CSR
- Outline the elements of the GRI reporting guidelines
- Explain how CSR affects the banking industry in particular

## Tutorial Overview

CSR refers to those actions whereby business seeks to contribute to sustainable economic development. In its commitment to sustainability, a business recognizes that, in addition to serving its shareholders' interests in the pursuit of economic value, it must also understand the legitimate concerns of other stakeholders such as employees and the wider community.

Changing attitudes on the part of consumers and investors mean that CSR is no longer seen as an expensive luxury, but can in fact result in net savings for the business. This tutorial covers the fundamentals of corporate social responsibility, with particular focus on the banking industry.

Prerequisite Knowledge Corporate Governance – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 mins

## **Tutorial Outline**

Topic 1: Overview of CSR

- What is CSR?
- Shareholder versus Stakeholder
- The Evolution and Development of CSR
- Avoidance of CSR Failures

Topic 2: Building a Business Case for CSR

- The "Triple Bottom Line"
- Costs and Benefits of CSR
- CSR and Risk Management
- Human Resources and Innovation
- The Case against CSR

## Topic 3: Sustainability Reporting

- Sustainability Reporting and The Global Reporting (GRI)
  - Reporting Principles and Guidance
    - Standard Disclosures
    - o Protocols
    - Sector Supplements

Topic 4: CSR and the Banking Industry

- CSR and the Banking Industry
- Risk Control and Transparency
- Consumer Protection and access to Banking Services
  - G3 Guidelines Financial Serve Sector
    - Product and Service Impact
    - Economic
    - o Other



# Syndicated Lending

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Understand the basic principles of syndicated lending
- Outline the syndication process and the players involved
- Describe the secondary market for syndicated loans

## **Tutorial Overview**

The syndicated loan market in its current form was originally developed in the US in the 1980s as a means of financing leveraged buyouts (LBOs). Since then, the global syndicated lending market has since grown significantly, rising to USD 4.5 trillion in 2007. For lenders, syndicating a loan agreement splits the lending risk among a number of participants. It also allows for a diversification of the lending portfolio from both a geographical and sectoral point of view. For borrowers, syndicated loans are an efficient way to raise larger amounts of capital and extend their banking relationships.

This tutorial looks at the fundamentals of syndicated lending, including the syndication process, players involved, fees, and the history of the syndicated lending market.

Prerequisite Knowledge Corporate Banking Products – Term Finance

Tutorial Level: Introductory Tutorial Duration: 75 mins

## **Tutorial Outline**

Topic 1: What is Syndicated Lending?

- Why Syndicate?
- Types of Borrower
- Investors in a Syndicated Loan
- Types of Syndicated Loan
  - o Term Loan
  - Revolving Credit Facility
- Pricing
- Syndicated Lending Main Players
- Benefits of Syndication for Borrowers and Lenders
- The History and Development of Syndicated Lending

**Topic 2: The Syndicated Lending Process** 

- The Three Phases
  - Pre-mandate Phase
  - o Post-mandate Phase
  - Post-closure Phase
  - Types of Syndicated Deal
    - Underwritten Deal
      - Best-efforts Deal
    - Club Deal
- Repayment
  - Amortization
  - Balloon repayment
  - o Bullet repayment
- Prepayment
- Fee income
  - Front-end fees
  - o Regular fees



Topic 3: The Secondary Market for Syndicated Loans

- Why a Secondary Market?
  - Secondary Market Participants
    - Market Makers
    - Active Traders/ Investors
  - Types of Purchase

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- $\circ$  Novation
- Assignment
- Participation



## **Trade Finance – An Introduction**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Outline the main risks associated with international trade
- Describe the main methods of payment used to settle cross-border trades
- List and describe the main commercial documents used in international trade
- Explain the role of banks in both facilitating payments and providing funding for international trade

## **Tutorial Overview**

Many of the products we buy and consume on a daily basis are traded internationally. In some cases, these items will have been transported half-way across the world before arriving in our shopping baskets. However, cross-border transactions present a number of potential difficulties for the parties – importers (buyers) and exporters (sellers) – involved. In addition to dealing with the practical problems arising from the movement of, and payment for, goods from one country to another, importers and exporters are simultaneously subject to numerous risks related to differing legislation, customs, and practices in these countries.

This tutorial provides an overview of international trade finance, including the main risks associated with cross-border trade, the various payment methods used by importers/exporters, the key commercial documents, and the role of banks in international trade.

Prerequisite Knowledge Financial Markets – An Introduction

Tutorial Level: Introductory Tutorial Duration: 75 mins

## **Tutorial Outline**

Topic 1: Risks of International Trade

- Difficulties of International Trade
- Key Risks
  - Foreign Exchange Risk
    - Transaction Exposure
    - Translation Exposure
    - Economic Exposure
    - o Country Risk
    - o Buyer Risk
    - o Product Risk
    - Transport Risk
    - Legal Risk

Topic 2: Methods of Payment

- Clean vs. Documentary Payments
- Draft/Bills of Exchange
- Methods of Payment
  - o Most vs. Least Risky
  - Open Account Trading
  - Documentary Collections
  - o Documentary Credits (Letters of Credit)
  - Payment in Advance
  - Countertrade

**Topic 3: Key Commercial Documents** 

- The Need for Documentation
- Key Documents



- Commercial Invoice
- o Packing List
- o Certificate of Origin
- o Customs Invoice
- o Consular Invoice
- Transport Documents
  - Bill of Lading
  - Air Waybill
  - Rail Waybill
  - Forwarding Agent's Certificate of Receipts (FCR)
- Insurance Documents

Topic 4: Role of Banks in Trade Finance

- Foreign Branches & Correspondent Banking
- Payment Services
  - Open Account Trading/Trade Services Utility (TSU)
  - o Documentary Credits and Collections
  - Check Payments
  - Bills of Exchange
  - o Bank Drafts
  - o Card Payments
  - o Trade-Related Guarantees & Other Undertakings
- Funding Facilities
  - Pre-Shipping Finance
  - Buyer Credits
  - Supplier Credits
  - Factoring & Forfaiting
  - o Post-Shipping Finance
  - Ancillary Services



## **Interest Rates & Benchmarks**

Tutorial Description Objectives On completion of this tutorial, you will be able to:

- Recognize the influence of official central bank rates on money market rates of various maturities
- Calculate interest on various money market products
- Identify market benchmark rates such as LIBOR and Euribor, and the growing significance of overnight indices as market benchmarks

## **Tutorial Overview**

This tutorial introduces official interest rates and their influence on financial markets and the economy as a whole. The tutorial outlines the use of simple, zero-coupon, interest rates and their application to accrual products in the money markets. It also examines market rates and the currency day count conventions used in money market calculations. Finally, the tutorial shows how reference rates such as LIBOR and Euribor are calculated in today's money markets, and how overnight indices have developed as a benchmark replacement for LIBOR and Euribor

Prerequisite Knowledge Interbank Market

Tutorial Level: Intermediate Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 1: Market Rates & Maturities

- Interest Rates & The Economy
- How Central Banks Influence Official Interest Rates
  - o Open Market Operations
  - Official Interest Rates
  - Lender of Last Resort
  - o Central Bank Reserves
- Official Rates & Interbank Rates
- Money Market Zero-Coupon Rates
- Interest Rates & Yield Curves
  - Normal Yield Curve
  - o Flat Yield Curve
  - Inverted Yield Curve

Topic 2: Interest Rate Calculations

- Day Count Conventions
  - o Actual/365 Fixed
  - Money Market Basis Actual/360
  - Interest Calculations
    - o Formula
    - o Example
- Comparing Interest Rates with a Different Day Basis
  - o Formula
  - $\circ$  Example

Topic 3: Reference Rates & Indices

- Reference Rates
  - LIBOR
    - Calculating LIBOR
    - Euribor
    - Why Are LIBOR & Euribor Important?



- Other Interbank Benchmark Rates 0
- Using Reference Rates
- Overnight Indices •
  - Overnight Index Swaps

  - Types of Overnight Average Rate
     Calculating the Overnight Average Rate for a Trade
  - LIBOR-OIS Spread



## **Money Market Funds**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the various features and characteristics of money market funds
- Compare the different valuation methods for money market funds, namely constant net asset value (CNAV) and variable net asset value (VNAV

### **Tutorial Overview**

This tutorial examines the important role played by money market funds (MMFs) in the wholesale money markets. It explores the difficulties that money market fund managers face in terms of counterparty credit risk and in identifying investment products that will deliver a better return than bank deposits. Key regulatory requirements in relation to issues such as credit quality, liquidity, diversification, and maturity are also discussed. Finally, the tutorial describes the accounting approach to the valuation of MMF assets and the use of net asset value (NAV) in this process.

Prerequisite Knowledge Money Markets – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 60 minutes

### **Tutorial Outline**

Topic 1: Overview of Money Market Funds

- What is a Money Market Fund?
- The Case for MMFs
- Features of MMFs
  - Fund Type
  - o Yield
  - Share Price (NAV)
  - o Credit Ratings
  - o Liquid Assets
  - o Redemptions
  - Lack of Deposit Insurance
- Establishing MMFs
- MMF Risks & Challenges
- Harmonization of Regulations
- Key Regulatory Requirements
  - Credit Quality
    - o Diversification
    - o Maturity
    - o Liquidity
  - Stress Testing
  - Transparency
  - Investor Considerations
- MMFs Around the World

Topic 2: Valuation of Money Market Funds

- Net Asset Value (NAV)
- Constant Net Asset Value (CNAV)
  - Distributing CNAV
  - Accumulating CNAV
- Variable Net Asset Value (VNAV)
  - Distributing VNAV
  - Accumulating VNAV
- Share Price Rounding ("Penny Rounding")



- Accounting Considerations for MMFs o Amortized Value ٠

  - o Market Value
  - o Shadow NAV



# **Basel III – Capital**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Describe the key elements of the amended capital adequacy regime under Basel III
- Define the concept of "qualifying capital" and understand the importance of common equity capital (CET1)
- Explain why additional capital buffers (capital conservation buffer and countercyclical capital buffer) were needed and what these buffers are
- Detail the timelines for full implementation of the Basel III capital requirements and summarize the key implementation issues

### **Tutorial Overview**

The financial crisis highlighted that both the quality and quantity of bank capital was insufficient to meet the losses that occurred. The size and nature of the losses, and the need to enlist government support to prevent bank failures, quickly galvanized the Basel Committee on Banking Supervision (BCBS) and the regulatory community to rethink the capital adequacy rules and minimum ratios (among other issues).

This tutorial describes the changes to the capital requirements under Basel III, including the tighter definition of qualifying capital and increased focus on CET1, the new capital buffers, and the revised minimum ratios. The impact of these changes on banks' capital structures are explored, as are the implementation issues during the transition period.

### Prerequisite Knowledge

Prior to studying this tutorial, you should have a broad understanding of the changes made by Basel III as described in the following tutorial:

Basel III – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 75 mins

### **Tutorial Outline:**

Topic 1: Capital Adequacy under Basel III

- Capital Adequacy Ratio (CAR)
- Qualifying Capital
- Loss-Absorbing Capital
- Going Concern versus Gone Concern Capital
- Changes to the Tiering Structure

### Topic 2: Qualifying Capital

- Tiering in Basel III
  - Tier 1 Capital: Common Equity Capital (CET1)
  - Tier 1 Capital: Additional Tier 1 (AT1)
  - o Tier 2 Capital
  - $\circ$  Deductions

Topic 3: Capital Buffers & Revised Capital Ratios

- Procyclicality & Capital Buffers
- Capital Conservation Buffer
- Countercyclical Capital Buffer
- Revised Capital Ratios



Topic 4: Implementation of Capital Requirements

- Transitional Arrangements
- Implementation Issues
  - Capital Replenishment
  - Deleveraging
  - Economic Weaknesses
  - Consistency
  - Will Basel III Make A Difference?



# Mergers & Acquisitions (M&A)

## **Tutorial Description**

Learning Objectives

On completion of this tutorial you will be able to:

- Outline the key types of mergers and acquisitions
- Explain the motives behind these transactions and the defensive tactics adopted by targets
- Describe the key steps in the merger process

## **Tutorial Overview**

This tutorial provides a broad overview of mergers and acquisitions (M&A). It describes the potential motives for engaging in a merger such as synergies, revenue enhancement and tax benefits. The defensive tactics available to firms subject to a hostile takeover bid and the different stages and participants in the merger process are described in detail. Finally, the history and development of the M&A market and relevant market codes and regulation are also discussed.

Prerequisite Knowledge Corporate Finance - An Introduction

Tutorial Level: Introductory Tutorial Duration: 75 mins

## **Tutorial Outline**

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Topic 1: Overview of Mergers & Acquisitions

- What are Mergers & Acquisitions?
- Friendly and Hostile Takeovers
- Hostile Takeovers Defensive Tactics
  - Staggered Board
    - o Supermajority Provision
    - o Asset Restructuring
    - o Poison Pill
      - Preferred Stock Plan
      - Flip-Over Plan
      - Flip-In Plan
      - Back-End Plan
      - Poison Put
    - White Knight
    - o Golden Parachute
    - o Greenmail
    - o Recapitalization/Share-buy back
    - o Other Defensive Tactics
      - Standstill Agreement
      - Litigation
      - Pac-Man Defense
      - Exclusionary Self-Tender
- Classifications of Mergers
  - Horizontal Mergers
  - Vertical Mergers
  - Conglomerate Mergers
- Demergers
- Reverse Mergers
- Accounting & Tax Considerations
- Regulation
  - City Code on Takeovers and Mergers
  - EU Takeover Directive
  - o Williams Act (US)

Topic 2: Motives for Mergers & Acquisitions



- Synergies
  - o Operational Synergy
  - Managerial Synergy
  - Financial Synergy
  - Revenue Enhancement
    - Market Power
      - Strategic Advantages
      - Marketing gains
- Tax Benefits

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- Tax Losses
- Increased Debt Capacity
- Surplus Funds
- Lower Capital Requirements
- Information Asymmetry
  - Bad Motives for Engaging in Mergers
    - Diversification
    - Earnings in Growth
    - Management Failings

Topic 3: The Merger Process

- The Role of Advisors in M&A Transactions
  - Financial Advisors
  - o Financiers
  - Accountancy an Auditing Firms
  - o Other Advisors
- Phases in the Merger Process
  - Development of M&A Strategy
  - Identification & Evaluation of Target Company
  - o Negotiations
  - The Transaction

Post-Merger Integration



## **Structured Trade Finance**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Explain the concept of structured trade finance and how it differs from traditional trade finance
- Describe the different solutions offered by structured trade finance providers
- Outline the role of development banks and export credit agencies (ECAs) in structured trade finance

### Tutorial Overview

The nature and complexity of international trade has changed dramatically over the past generation or so. Emerging markets now play the most dynamic role in international trade and are the focus of global supply chain development. As large-scale projects and global supply chains reach deeper into emerging markets, the risk of nonperformance and nonpayment increases.

These prevailing trends in international trade have created the need for financing solutions that are more robust and can mitigate most of the risks associated with complex trade initiatives involving riskier emerging markets. Structured trade finance has emerged to support these initiatives by addressing risks related to the performance or completion of a transaction, rather than more traditional reliance on the financial soundness of the parties to a transaction.

This tutorial describes the concept of structured trade finance in detail and how it differs from traditional trade finance. You will also learn about the different types of structured trade finance solutions and the role of the different lending institutions involved.

Prerequisite Knowledge Export Finance

Tutorial Level: Intermediate Tutorial Duration: 60 mins

## **Tutorial Outline**

Topic 1: Overview of Structured Trade Finance

- What is Structured Tarde Finance?
- Providers of Structured Trade Finance
- Structured Trade Finance versus Traditional Trade Finance
- Risks in International Trade that Affect Structured Trade Finance
  - Performance Risk
  - o Payment Risk
  - Political Risk
  - o Legal Risk
  - Market (Volatility) Risk
- Types of Lending in Structured Trade Finance
  - Asset-Based Lending
  - Cash Flow Lending
- Additional Features of Structured Trade Finance
  - o Collateral Management
  - Hedging
  - o Insurance
  - o Guarantees
- Benefits of Structured Trade Finance
  - Flexible Financing Solutions
  - Risk Reallocation
  - Avoidance of Restrictive Covenants on the Borrower's Balance Sheet
  - o Use of Future Cash Flows to Raise Export Financing
  - Entry into Emerging Markets
  - Lower Funding Costs



- Drawbacks of Structured Trade Finance
  - o Performance Risk
  - $\circ$  Complexity
  - Up-Front Costs
  - Price Volatility
  - Reliability of Collateral Managers
  - Political Risk

**Topic 2: Structured Trade Finance Solutions** 

- Pre-Export Financing
- Tolling & Processing
- Warehouse Financing
- Borrowing Base Financing
- Syndicated Lending

Topic 3: Role of Development Banks & ECAs in Structured Trade Finance

- Development Banks
- Products Offered
- Standard Loans
- Local Currency Financing
- Guarantees and Pre-Export Facilities
- Equity
- Collateral Requirements
- Export Credit Agencies (ECAs)



## **Trade Finance Security**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Describe the differences between various guarantees/bonds that are offered by banks for international trade transactions
- Outline the purpose of standby letters of credit and demand guarantees
- Explain the role of export credit agencies (ECAs) in the provision of security for trade finance transactions

### Tutorial Overview

International trade transactions can give rise to significant risks and complexities, including nonpayment risk and cash flow uncertainties. In large-scale projects, these risks are often increased. This makes it necessary to consider instruments that can better secure transactions.

Trade finance security is the collective term for risk mitigation instruments which are particularly suited to large-scale international projects. This tutorial focuses on bank guarantees or bonds, standby letters of credit, and demand guarantees, which are the most common risk mitigation tools in this area. These instruments can help to reduce cash flow uncertainty, non-payment risk, and non-performance risk.

Prerequisite Knowledge Export Finance

Tutorial Level: Intermediate Tutorial Duration: 60 mins

## **Tutorial Outline**

Topic 1: Bank Guarantees/Bonds

- Definition of Bank Guarantees/Bonds
  - Parties Involved
    - o Applicant
    - o Beneficiary
    - Guarantor
- Surety Guarantees versus Demand Guarantees/Bonds
- Direct versus Indirect Guarantees
- Types of Bank Guarantee/Bond
  - Performance Guarantees/Bonds
  - Bid Bonds/Tender Guarantees
  - o Advance Payment Guarantees/Bonds
  - o Retention Money and Maintenance/Warranty Guarantees
  - Payment Guarantees
- Cost and Collateral
- Benefits & Drawbacks
  - Beneficiary's Perspective
  - o Applicant's Perspective
- Bank Guarantees/Bonds versus Other Trade Finance Security Instruments
  - Guarantees/Bonds versus Letters of Credit
  - o Guarantee/Bonds versus Export Credit Insurance

Topic 2: Demand Guarantees & Standby Letters of Credit

- Demand Guarantees
  - o Definition
  - o Benefits & Drawbacks
  - o Bond Insurance
  - Standby Letters of Credit
- Topic 3: Role of Export Credit Agencies in Trade Finance Security
  - ECAs & Bank Guarantees/Bonds



- Direct Bond Issuance to the Importer
- Bond Issuance to the Guarantor (Exporter's Bank)



## **Asset Management – An Introduction**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to

- Identify the key client sectors of the asset management industry
- Interpret the concepts of asset allocation, as well as passive and active management
- List the main types of investment vehicle used in the asset management industry
- Recognize the current state of play in the asset management space and future industry trends

### **Tutorial Overview**

Asset management is the management of portfolios of assets by professional firms serving institutional, high net worth (HNW), and retail clients. This tutorial provides an overview of the structure and activities of a typical asset management firm, including its clients, products, and services. The current state of the global asset management industry is also discussed.

Prerequisite Knowledge Investment – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 1: Overview Of Asset Management

- Asset Management Basics
- Asset Management Sectors
  - Institutional Asset Management
    - Wealth Management (Private Client Services)
    - Retail Asset Management
- Asset Allocation
  - Strategic Asset Allocation (SAA)
  - Tactical Asset Allocation (TAA)
- Active & Passive Management

**Topic 2: Investment Funds** 

- Overview of Investment Funds
- Collective Investment Vehicles
- Hedge Funds
- Private Equity Funds

Topic 3: Market Development

- Current State of the Asset Management Industry
- Asset Management by Region
- Asset Management: Future Growth



## **Investment – An Introduction**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify a number of different perspectives on investment and some of the motives for investment
- List the key characteristics of various asset classes
- Recognize the risk-return trade-off and the main risks to which investors are exposed

### **Tutorial Overview**

Terms like "investment" or "investing" are used in the media every day without anyone actually defining what exactly they mean. This tutorial adopts a different perspective and will set you out on the road to understanding the fundamentals of investment and its management. Beginning with a discussion of the concept of investment as a whole and the various perspectives on it, the tutorial goes on to deal with a variety of crucial concepts and issues that must be grasped by all investment industry professionals.

Prerequisite Knowledge Financial Markets – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 1: Investment Basics

- Some Perspectives on Investment
- Definition of Investment
- Why Invest?
  - Differing Motivations
  - Investing vs. Gambling
    - An Expert View
  - **Investment Perspectives** 
    - o Finance
    - $\circ$  Economics
- Investors
  - Institutional Investors
  - o Individual Investors (Retail)
  - Individual Investors (HWNIs)
- Passive vs. Active Investment
- Direct vs. Indirect Investing

### Topic 2: Investable Assets

- Asset Classes
  - Equities
    - $\circ \quad \text{Fixed Income} \quad$
    - Cash & Cash-Equivalents
  - Alternative Assets

## Investment Risk & Return

- Trading Risk for Return
- Modern Portfolio Theory (MPT)
  - Attitude to Risk
- Alternatives to MPT
  - o Behavioral Finance
  - o Adaptive Markets Hypothesis (AMH)
- Investment Risk
  - Credit Risk
  - Interest Rate Risk
  - o Reinvestment Risk



- Market Risk 0
- Liquidity Risk Inflation Risk 0
- 0
- Leveraging •
  - Using Borrowed Funds
     Using Derivatives



## Hedge Funds – An Introduction

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Define what a hedge fund is and describe the main characteristics of a hedge fund
- Identify the key players in the hedge fund industry

### **Tutorial Overview**

This tutorial looks at the key characteristics of hedge funds and provides an outline of the development of the hedge fund industry. It then discusses the key players in the hedge fund industry and the roles they perform.

Prerequisite Knowledge Alternative Assets – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 1: Hedge Fund Characteristics

- What Is a Hedge Fund?
- Key Developments
- Strategies
- Success & Growth
- Hedge Fund Highs & Lows
- Characteristics of Hedge Funds
  - o Returns
  - o Legal Structure
  - o Fee Structure
  - Derivatives & Leverage
- Regulatory Environment

### Topic 2: Hedge Fund Players

- Hedge Fund Investors
- Investor Considerations
- Hedge Fund Management
- Hedge Funds as Clients
- Prime Brokers
- Other Third Parties



## Hedge Funds – Investing

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Compare the performance of hedge funds to other asset classes
- Identify the key measures of hedge fund risk
- Recognize the issues involved in evaluating hedge funds

## **Tutorial Overview**

In this tutorial we describe the benefits and shortfalls of various measurements of risk and return and highlight the way in which an investor can examine alternative opportunities. We look at how it is possible to separate measurements of return which are "skill-based" from those due to overall market movements and how a potential investor can distinguish between "good" and "bad" hedge fund investments.

Prerequisite Knowledge Hedge Funds – An Introduction

Tutorial Level: Intermediate Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 1: Hedge Fund Performance

- Hedge Funds vs. Other Asset Classes
- Downside Protection
- Negative Compounding
- Efficient Markets
- Searching for Skill in Investing
- A Zero Sum Game?
- Pure Alpha
- Dead Weight

Topic 2: Hedge Fund Risk

- What is Risk?
- Risk Ratios
- Sharpe Ratio
- Other Risk Ratios
  - Sortino Ratio
    - Information Ratio (IR)
    - Omega Ratio
- Skewness & Kurtosis
- Biases Skewing the Data

Topic 3: Evaluating Hedge Funds

- Problems of Quantitative Analysis
- Maximum Drawdown
- Calculating Alpha
- Is Leverage Risky?
- Liquidity
- Investment Style, Style Drift, & Adaptability



## Hedge Funds – Strategies

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Recognize how hedge fund returns are related to market movements
- Classify the major hedge fund investment styles (such as relative value trading, event-driven strategies, and directional trading) and their different characteristics, market exposure, and leverage requirements

### Tutorial Overview

Hedge funds exist to make money from investing – anywhere. This leads to numerous different and ever-evolving investing styles. These hedge fund investing styles are the subject of this tutorial. It examines the key differences between such styles in terms of market exposure, required leverage, correlation to major markets, and gives a description of the key categories. It also briefly examines the topic of hedge fund factor analysis and replication.

Prerequisite Knowledge Hedge Funds – An Investing

Tutorial Level: Intermediate Tutorial Duration: 60 minutes

### Tutorial Outline

Topic 1: Hedge Fund Strategies & Performance

- Hedge Fund Strategies & Market Correlation
- Hedge Fund Strategies Compared
- Why Different Strategies Matter
- Multi-Strategy Hedge Funds

Topic 2: Relative Value Trading

- Overview of Relative Value Trading
- Arbitrage & Hedge Fund Styles
- Equity Market Neutral (EMN)
- Fixed Income Arbitrage
- Convertible Arbitrage

**Topic 3: Event Driven Strategies** 

- Overview of Event Driven Arbitrage
- Merger Arbitrage (Risk Arbitrage)
- Distressed Securities
- **Topic 4: Directional Strategies** 
  - Overview of Directional Strategies
  - Global Macro
  - Short Bias
  - Long/Short Equity
  - Emerging Markets

Topic 5: Other Hedge Fund Strategies

Managed Funds



- Funds of Hedge Funds 130/30 Strategies ٠
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- Hedge Fund Replication •



## **Emerging Markets – An Introduction**

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Define an 'emerging market' and describe how these markets have developed over the years
- Outline the key emerging markets, notably the 'BRIC' economies
- Describe the main considerations and risks associated with investing in emerging markets

#### **Tutorial Overview**

Over the past generation or so, emerging markets, most notably the BRIC economies of Brazil, Russia, India, and China, have grown rapidly – growth that is projected to continue in the years to come as these markets strengthen their global positions and drive the world economy. China is already the world's largest exporter and in 2010 overtook Japan as the world's second largest economy after the United States.

Although astute investors can earn impressive returns on emerging market investments, this is not an area for the faint-hearted. Significant market volatility, frequent political crises, currency risk, and lack of regulatory oversight, are just some of the risks faced by investors in these markets.

This tutorial outlines the development of emerging markets and how they differ from developed economies. The key emerging markets and the risks of investing in these markets are also discussed.

Prerequisite Knowledge Financial Markets – An Introduction

Tutorial Level: Introductory Tutorial Duration: 75 mins

### **Tutorial Outline**

Topic 1: Overview of Emerging Markets

- Definition of an Emerging Market
- Classification of Emerging Markets
  - o Advanced
  - Secondary/ Frontier
  - History of Emerging Markets
    - Phase 1: Manufactured Exports (1980s- Late 1990s)
    - Phase 2: Commodities Boom (2000s)
    - o Phase 3: Domestic Demand & Demographics
- Key Growth Factors
  - Demographics
  - o Infrastructure
  - Financial Services
- Decoupling

Topic 2: Key Emerging Markets

- BRICs
  - Brazil
  - o Russia
  - o India
  - o China
- Other Acronyms & Markets (Selected Examples)
  - $\circ$  Indonesia
  - Mexico
  - o Turkey
  - South Africa
  - o Malaysia



Topic 3: Investing in Emerging Markets

- Benefits
  - o Higher Returns
  - Diversification
- Asset Classes
  - 0
- Local EM Stocks
- Depository Receipts
- Domestic Stocks with EM Operations
- Funds
- o Fixed Income
- Real Estate
- o Alternative Assets
  - Derivatives
  - Currencies
  - Hedge Funds
  - Private Equity
- Risks
  - o Political Risk
  - o Credit Risk
  - o Market Risk
  - Currency Risk
  - Concentration Risk
  - o Liquidity Risk
  - Regulatory Risk



## **Emerging Markets – China**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Describe China's evolution from a centrally-planned economy to the world's second largest market economy
- Outline the structure of the Chinese banking system and the importance of the major reforms it has seen in recent times
- Explain how Chinese financial markets are evolving, but remain underdeveloped relative to those in developed economies

### **Tutorial Overview**

Once remote from the international community, a series of reforms since the late 1970s has seen China evolve into an economic powerhouse. In 2010, the country surpassed Japan as the world's second largest economy after the United States. Such has been its phenomenal growth that China is predicted to overtake the US at some point in the 2020s. However, despite the lofty predictions, China faces some significant economic and other challenges.

This tutorial looks in detail at China and its meteoric rise to economic superpower, in addition to some of the challenges the country faces. It also describes the banking and financial sector, which has had to evolve in line with China's explosive economic growth.

Prerequisite Knowledge Emerging Markets – An Introduction

Tutorial Level: Introductory Tutorial Duration: 75 mins

### **Tutorial Outline**

Topic 1: Country Overview

- A Short History of China
- Relationship with Hong Kong
- Economy
  - o Economic Growth
  - o International Trade
  - o Inflation
  - o Employment
  - o Industry
  - Transport
  - Energy

Topic 2: Banking in China

- Historical Background
  - Monobank Background
  - Separation of Central & Commercial Banking Functions
  - Other Reforms
  - The 'Big Four' Today
    - Industrial & Commercial Bank of China (ICBC)
    - China Construction Bank (CCB)
    - Bank of China (BOC)
    - Agricultural Bank of China (ABC)
  - Other Financial Institutions
- Recent Developments
- Bank Regulation & Supervision
  - Monetary Policy
    - Interest Rate Setting
    - Reserve Requirements



- Open Market Operations
- Window Guidance
- Exchange Rate Management

**Topic 3: Financial Markets** 

- Overview
  - Underdeveloped Capital Markets
  - Difficulties in Obtaining Financing
- Stock Markets
  - Main Markets (Shanghai & Shenzhen)
  - Shortcomings & Inefficiencies
- Bond Markets
  - Historical Backgrounds
    - Underdeveloped Corporate Bond Market
    - Market Reforms
- Interbank (OTC) vs. Exchange Market
- Commodities
- Derivatives
- Real Estate



## **Real Estate – An Introduction**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Identify the characteristics of real estate and the role of the key players in real estate markets
- Distinguish between the two real estate sectors, residential and commercial, and their subsectors
- Recognize the main features of real asset as an asset class

## **Tutorial Overview**

This tutorial describes the fundamentals of real estate and distinguishes between the residential and commercial real estate sectors (and subsectors). The characteristics of real estate as an asset class are discussed in detail, including a comparison with other asset classes. The tutorial also looks at the phenomenon of real estate cycles and the features of such cycles.

Prerequisite Knowledge Investment – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 2: Real Estate Basics

- What is Real Estate?
- Characteristics of Real Estate
  - o Immovability
  - o Divisibility
  - o Durability
  - Heterogeneity
  - Investment & Consumption Good
- Residential vs. Commercial Real Estate
- Ownership
  - o Freehold
  - o Leasehold
  - o Ownership, Mortgages, & Security
- Market Players
  - Property Owners/Homeowners
  - Tenants/Lessees
  - Developers
  - Agents/Intermediaries
  - Investors
  - Banks & Other Lenders
  - Mortgage Brokers

**Topic 2: Real Estate Sectors** 

- Residential Real Estate
- Commercial Real Estate
  - Sectors
  - Sector Comparison
  - o Office
  - o Apartment
  - o Retail
  - o Industrial
  - o Leisure
  - o Other

Topic 3: Real Estate as an Asset Class



- Rental Income
- Capital Appreciation
  - Residential vs. Commercial Real Estate
    - o Costs
    - o Lease Agreements
    - o Returns
- Comparison With Other Asset Classes
  - Correlation
  - Valuation
- Risks

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- $\circ$  Valuation
- o Liquidity
- Leverage
- Planning & Other Legal Issues
- o Tenants
- o Taxation & Other Costs
- Macroeconomic Conditions
- Diversification
- Real Estate Cycles
  - Real Estate Cycles & The Economy



## **Real Estate – Investing**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Differentiate between direct and indirect investment in real estate, and outline the key dynamics of the residential and commercial sectors
- Describe the main considerations for investors looking to invest directly in physical properties
- Explain the various methods of indirect investment in real estate and the differences between these methods

### **Tutorial Overview**

This tutorial describes the different means by which investors can obtain exposure to real estate as an asset class. It begins by looking briefly at the dynamics of both the residential and commercial real estate sectors from an investment point of view. The tutorial then moves on to contrast direct investment in "bricks and mortar" to various methods of indirect investment, with particular emphasis on real estate investment trusts (REITs) which have become hugely popular in recent times.

Prerequisite Knowledge Real Estate – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 minutes

**Tutorial Outline** 

Topic 1: Real Estate Investment

- Types of Investment
  - Direct (Physical) Investment
  - o Indirect (Financial) Investment
- Sector Dynamics
  - Residential Real Estate
  - o Commercial Real Estate

Topic 2: Direct Investment

- Overview of Direct Investment
- Leverage
  - LTV Ratios
    - Impact of Leverage: Example
- Direct Investment Considerations
  - o Suitability
  - Overpaying
- Direct Investment Drawbacks

Topic 3: Indirect Investment

- Methods of Indirect Investment
- Stocks
- Real Estate Investment Trusts (REITs)
  - o REIT Returns
  - Equity REITs
  - Mortgage REITs
  - Investing in REITs
    - Individual REITs
      - Fund REITs
- Real Estate Limited Partnerships (RELPs)
  - o RELPs vs. REITs
- Real Estate Operating Companies (REOCs)
- Fixed Income Securities
- Derivatives



## **Real Estate – Valuation**

## **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Describe the different price determining factors of real estate
- Understand the methods used to value real estate
- Discuss how property values can be compared
- Describe the means by which real estate investment trusts (REITs) are valued

### **Tutorial Overview**

Real estate is generally considered to be an "alternative asset," complementary in a portfolio context given its low correlation with the stock, bond and money markets. Fund managers need to determine how much real estate to add to a portfolio and at what price. Here we learn about how investors can value real estate.

Prerequisite Knowledge Real Estate – Investing

Tutorial Level: Introductory Tutorial Duration: 60 minutes

## **Tutorial Outline**

Topic 1: Basics of Real Estate Valuation

- Features of Real Estate Valuation
- Determinants of Property Value
  - $\circ$  Demand
  - Supply
  - o The Property Itself
  - Property Transfer Process

Topic 2: Valuation of Individual Properties

- Valuation Indicators
  - Transaction Prices vs. Market Valuation
- Methods of Valuation
  - Replacement Cost Approach
  - o Direct Sales Comparison Approach
  - o Income Approach

**Topic 3: Relative Valuation Measures** 

- Valuation Measures
- House Price to Net Rental Ratio
- Yield

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- House Price to Income (or Earnings) Ratio
- Other Ratios

Topic 4: Valuation of Real Estate Investment Trusts (REITs)

- Types of REIT
- Valuing REITs
  - Net Asset Value (NAV)
  - Funds from Operations (FFO)
  - Key Elements of FFO Measure
- Drawbacks of the FFO Measure



# Socially Responsible Investing (SRI) – An Introduction

### **Tutorial Description**

Objectives On completion of this tutorial, you will be able to:

- Explain what socially responsible investment is and list the different strategies available to investors in this field
- Describe some of the key areas in SRI today, including green investing (cleantech investing) and the UN Principles for Responsible Investing (UN PRI)

### Tutorial Overview

The idea of socially responsible investing (SRI) has gained significant impetus in recent years. Sometimes referred to as 'ethical investing', SRI is an investment process that considers the social and environmental consequences of investments, both positive and negative, within the context of rigorous financial analysis. This tutorial provides a broad overview of the SRI industry, including the techniques used in responsible investment, the development and performance of the market, and global initiatives for responsible investing.

Prerequisite Knowledge Investment – An Introduction

Tutorial Level: Introductory Tutorial Duration: 60 mins

## **Tutorial Outline**

Topic 1: Overview of Socially Responsible Investing (SRI)

- Overview of Socially Responsible Investing
- Socially Responsible Investing and ESG
- SRI Activities
  - o Screening
  - o Shareholder Advocacy
  - o Integration of Economic Social and Corporate Governance (ESG) Factors
  - Community Investing
- SRI Performance
- SRI Indexes
- Types of Socially Responsible Investor
- The History and Development of SRI
- The Current State of the SRI Marketplace

Topic 2: Green Investing

- Overview of Green Investing
- Cleantech