

Annexure 28

**ALL COURSES OF
NCFM (NSE
ACADEMY'S**

**Certification in
Financial Markets**

(NCFM) – annexure 28

Financial Markets: A Beginner's Module

Markets and Financial Instruments Types of Markets: Equity Debt, Derivatives Commodities; Meaning and features of private, Public companies; Types of investment avenues. – Primary Market: Initial Public Offer (IPO); Book Building through Online IPO; Eligibility to issue securities; Pricing of Issues; Fixed versus Book Building issues; allotment of Shares; Basis of Allotment; Private Placement. – Secondary Market: Role and functions of Securities and Exchange Board of India (SEBI); Depositories; Stock exchanges Intermediaries in the Indian stock market Listing; Membership; Trading Clearing and settlement and risk management; Investor protection fund (IPF); and Do's and Don'ts for investors, Equity and debt investment. – Derivatives: Types of derivatives; Commodity and commodity exchanges; Commodity versus financial derivatives. – Financial Statement Analysis Balance sheet; Profit & loss account; Stock market related ratios; Simple analysis before investing in the shares; understanding annual report; Director's report etc.

Mutual Funds: A Beginner's Module

Mutual Funds Concept and structure of mutual funds in India; Role of custodian; Registrar and transfer agent; AMC; New fund offer's & procedure for investing in NFO; Investors rights and obligations. – Mutual Fund Products and Features Concept of open ended and close ended fund; Types of funds - equity, index, diversified large cap funds, midcap fund, sec or fund and other equity schemes; Concept of entry and exit load Expense ratio; Portfolio turnover; AUM; Analysis of cash level in portfolio. – Gold ETF's Introduction of exchange traded funds, Market making by authorized Participants; Creation Units; Portfolio deposits and cash Component. – Debt Funds Salient features of debt fund; Concept of interest rate and credit risk; Pricing of debt instrument. – Liquid Funds Salient features of liquid fund; Floating rate scheme and portfolio churning in liquid funds. – Taxation Taxation of capital gains; Indexation benefit and FMP. – Regulation Role and objectives of AMFI; Different types of plans; Systematic Investment Plan (SIP); Systematic Transfer Plan (STP) and Systematic Withdrawal Plan (SWP); Dividend payout.

Currency Derivatives: A Beginner's Module

Derivatives as a Risk Management Tool Concept of risk; Risk management; Types of traders in the derivatives markets – **Currency Markets** Exchange rate; Fixed and floating exchange rate regime; Factors affecting Concept of quotes; Tick-size Spreads; Spot transaction and forward transaction – **Currency Futures** Forward contracts; Futures contracts; Pricing of futures contracts.

Strategies using Currency Futures Hedging, speculation and arbitrage in currency futures – **NSE's Currency Derivatives Segment** Product definition; Trading underlying versus trading futures; Uses of currency futures at NSE – Trading, Clearing, Settlement and Risk Management Membership; Future contract specifications; Trading system; The trader workstation; Basis of trading; Client-Broker relationship in derivatives segment; Clearing entities; Position limits; Margins; Settlement of contracts.

Equity Derivatives: A Beginner's Module

Introduction, Definition and Applications of Derivatives Definition and origin of derivatives; Definitions of forwards; futures; options; Moneyless of an option; Participants in the derivatives market and uses of derivatives. – **Trading Futures and Options** Pay-off of futures; Theoretical model for future pricing; Option prices. – **Derivatives Trading on the Exchange** Derivatives trading and settlement on NSE; using daily newspapers to track futures and options; Accounting and taxation of derivatives.

Interest Rate Derivatives: A Beginner's Module

Interest Rates and Time Value Of Money Introduction; Factors affecting the level of interest rate; Impact and classification of interest rate and Present value, Future value and Discount factor. – **Money and Fixed Income Markets** Money markets and fixed income markets. – **Government Bonds** Introduction to and Characteristics of Bonds; Concept of yield; Relationship between bond price and interest rate; Repo and cost of funding and other bond terminology. – **Interest Rate Derivatives** OTC Derivatives; Exchange traded contracts and key terminology of futures market. – **Interest Rate Futures (IRF) in India** Interest rate futures; Rationale; Contract

specifications; Settlement and Risk Management. – An Explanation of Key Concepts in IRF Why a notional bond is being used as underlying; Conversion factor; Invoice price; Cheapest to deliver bond; Bond basis. – Applications and Trading of Interest Rate Futures Participants in the IRF market; hedging applications of interest rate derivatives. Speculation and Arbitrage strategy.

Commercial Banking in India: A Beginner's

Introduction Definition of banks, Evolution of Commercial Banks in India, Functions of Commercial Banks, Competitive Landscape of Banks in India. Banking Structure in India Banking Structure in India, Role of RBI vis-'-vis other commercial banks. – Bank Deposit Accounts Introduction to Bank Deposits, Types of Deposit Accounts, Strategies of mobilizing deposits, Common guidelines of opening and operating accounts, deposit related services, Deposit services offered to Non-Resident Indians, Deposit Insurance. Basics of Bank Lending Principles of Lending and Loan Policy, Basics of Loan. Appraisal, Credit decision making and review, Types of Advances, Management of Non-Performing Assets. – Bank Investments Investment Policy, Statutory Reserve Requirements, Non-SLR Requirements, Banks'Investment Classification and Valuation Norms. – Other Activities of Commercial Bank. Other Basic Banking activities, Para -banking Activities. Relationship between Banks and Customers Strategy for expanding customer base, services to different customer groups, competition among banks for customers, customer relationship management, Banking Options ombudsman Scheme, Know Your Customer (KYC) norms Evolving Trends in Modern Banking Technology, Outsourcing of Non-core Activities, Financial Inclusion

Securities Market (Basic) Module – Securities Market in India - An Overview

Securities market and financial system; Products, participants and functions; Primary market; Secondary market; Derivatives market; Regulators; Exchanges; Depositories; Clearing corporations; Regulatory framework; Reforms. – Primary Market Book building; Credit rating; Merchant banking; On-line IPOs; Demat issues; Private placement; Virtual debt portals; ADRs/GDRs; Other regulations;

Public issues; Euro issues; Debt issues; Collective investment vehicles viz., MFs, VCFs, CISs. – Secondary Market Membership; Listing; Trading and settlement mechanism; Technology; Trading rules- Insider Trading; Unfair trade practices; Takeovers; Buy back; Turnover; Market capitalization; Prices; Liquidity; Transaction costs; Risk management; Indices. – Government Securities Market Indian debt market; Primary market; Secondary market-NDS; NDS-OM; CCIL. Wholesale debt market (WDM) segment of NSE. Derivatives Market Products, Participants and functions; Trading mechanism; Membership; Contract specification; Clearing & Settlement; Open interest; Implied interest rate; Implied volatility; Risk management; Debt derivatives. Mathematics and Statistics Measures of central tendency; Return and Risk.

CLEARING, SETTLEMENT AND RISK MANAGEMENT MODULE

Section 1. Introduction 1.1 About NSCCL 1.2 Segments 1.3 Clearing Members 1.4 Custodial Participants 1.5 Clearing Accounts 1.6 Systems and Interfaces Section 2. Liquid Asset 2.1 Acceptable Forms 2.2 Minimum Deposit Requirement 2.3 Procedure for Submission of Collaterals 2.4 Procedure for Release of Collaterals 2.5 Procedure for Transfer of Collaterals 2.6 Deposited Collateral Information Section 3. Capital Market 3.1 Over View 3.2 Clearing 3.3 Settlement 3.4 Margins 3.5 Action for Shortages and Penalties Section 4. Securities Lending and Borrowing Scheme. 4.1 Over View 4.2 Clearing 4.3 Settlement 4.4 Adjustments for Corporate Actions. 4.4 Margins 4.6 Position Limits 4.7 Dealings with Clients Section 5. New Debt Segment 5.1 Overview 5.2 Clearing 5.3 Settlement 5.4 Margins 5.5 Action for Shortages and Penalties. Section 6. Equity Derivatives Segment 6.1 Overview 6.2 Clearing 6.3 Settlement 6.4 Margins 6.5 Position Limits 6.6 Action for Shortages and Penalties Section 7. Currency Derivatives Segment. 7.1 Overview 7.2 Clearing 7.3 Settlement 7.4 Margins 7.5 Position Limits 7.6 Action for Shortages and Penalties Section 8. Services 8.1 Connect2nse Margins 8.2 Information via SMS 8.3 Margins and Collateral Information on Member Portal. Section 9. Model Paper

5 NCFM Intermediate Modules

Capital Market (Dealers) Module (CMDM) –

An Overview of the Indian Securities Market Market segments, Key indicators of securities market, Products and participants, Market segments and their products, Reforms in Indian securities markets – Trading Membership Stock brokers, NSE membership, Surrender of trading membership, Suspension & expulsion of membership, Declaration of defaulter, Authorized person, Sub-brokers, Broker-clients relations, Sub-broker-clients relations, Investor service cell and arbitration, Code of Advertisement – Trading Introduction, NEAT system, Market types, Trading system users hierarchy, Local database, Market phases, Logging on, Log off/exit from the application, Neat screen, Invoking an inquiry screen, Order management, Trade management, Limited physical market, Block trading session, Retail debt market (RDM), Trading information. downloaded to members, Internet broking, Wireless application protocol (wap), Computer to computer link (ctcl) facility – Clearing and Settlement Introduction, Key terminologies used in clearing and settlement process, Transaction cycle, Settlement agencies, Clearing and settlement process, Securities and funds settlement, Shortages handling, Risks in settlement, Risk management, International securities identification number, Data and report downloads – Legal Framework SEBI (intermediaries) regulations, 2008, SEBI (prohibition of insider trading) regulations, 1992, SEBI (prohibition of fraudulent and unfair trade practices relating to, Securities market) regulations, 2003, the depositories act, 1996, Indian contract act, 1872, Income tax act, 1961 – Fundamental Valuation Concepts Time value of money; Understanding financial Statements.

Derivatives Market (Dealers) Module .

Introduction to Derivatives Types of Derivative Contracts, History of Financial Derivatives Markets, Participants in a Derivative Market, Economic Function of the Derivative Market – Understanding Interest Rates and Stock Indices Understanding Interest rates, Understanding the Stock Index, Economic Significance of Index Movements, Index Construction Issues, Desirable Attributes of an

Index, Applications of Index. – Futures Contracts, Mechanism and Pricing Forward Contracts Limitations of forward markets, Introduction to Futures, Distinction between Futures and Forwards Contracts, Futures Terminology, Trading Underlying vs. Trading Single Stock Futures, Futures Payoffs, Pricing Futures, Pricing Stock Futures. – Application of Futures Contracts Understanding Beta, Numerical illustration of Applications of Stock Futures – Options Contracts, Mechanism and Applications Option Terminology, Comparison between Futures and Options, Options Payoffs, Application of Options – Pricing of Options Contracts and Greek Letters Variables affecting Option Pricing, The Black Scholes Merton Model for Option Pricing (BSO), The Greeks – Trading of Derivatives contracts Futures and options Trading system, the trader workstation, Future and options Market Instruments, criteria for stocks and index eligibility for trading charges. Clearing and Settlement Clearing Entities, Clearing Mechanism, Settlement Procedure, Risk Management, Margining System – Regulatory Framework Securities Contracts (Regulation) Act, 1956, Securities and Exchange Board of India Act, 1992, Regulation for Derivatives Trading, Adjustments for Corporate Actions – Accounting for Derivatives Accounting for futures, Accounting for options, Taxation of Derivative Transaction in Securities.

Investment Analysis and Portfolio Management •

Objectives of Investment Decisions Introduction; Types of Investors; Constraints; Goals of Investors. • Financial Markets Introduction, Primary and Secondary Markets; Trading in Secondary Markets; Money Market; Repos and Reverse Repos; Bond Market; Common Stocks." • Fixed Income Securities Introduction-Time Value of Money; Simple and Compound Interest Rates; Real and Nominal Interest Rates; Bond Pricing Fundamentals; Bond Yields; Interest Rates; Macaulay Duration and Modified Duration • Capital Market Efficiency Introduction; Market Efficiency; Departures from the EMH • Financial Analysis and Valuation Introduction; Analysis of Financial Statements; Financial Ratios (Return, Operating and Profitability Ratios); Valuation of Common Stocks; Technical Analysis." • Modern Portfolio theory Introduction; Diversification and Portfolio Risks; Equilibrium Models The CAPM Multifactor Models; The Arbitrage Pricing Theory. • Valuation of Derivatives

Introduction; Forwards and Futures; Call and Put Pricing; Black-Scholes Formula • Investment Management Introduction; Investment Companies; Active vs. Passive Portfolio Management; Cost of Management –Entry/Exit Loads Fees; Net Asset Value ; Classification of Funds ; Other investment companies; Performance assessment of managed funds.

Fundamental Analysis Module

Fundamental Analysis: An introduction 1. What is fundamental analysis? 2. Why is fundamental analysis relevant for investing? - Efficient Market Hypothesis (EMH), Arguments against EMH, Does fundamental analysis work? 3. Steps in Fundamental Analysis –
Brushing up the Basics 1. Concept of “Time value of Money” 2. Interest Rates and Discount Factors – Opportunity cost, Risk-Free Rate, Equity Risk Premium, The Beta, Risk Adjusted Return (Sharpe Ratio) – Understanding Financial Statements 1. Where can one find financial statements – The Director’s Report, The Auditor’s Report, Financial Statements: Balance Sheet, Income Statements, Schedules and Notes to the Accounts, Cash Flow Statement 2. Financial Statement Analysis and Forensic Accounting 3. Comparative and Common-size financial statements 4. Financial Ratios 5. Du-Pont Analysis 6. Cash Conversion cycle 7. The Satyam case and need for forensic accounting – Valuation Methodologies 1. Top-Down valuation (EIC Analysis) – Economy, Industry, Company. 2. Discounted Cash Flow (DCF) Models 3. Dividend Discount Model (DDM). Free Cash Flow to Firm (FCFF) and Free Cash Flow to Equity (FCFE) based DCF 5. Sum of the parts (SOTP) 6. Price-to-Earnings (PE) ratio. 7. Price to Book Value PB Ratio. 8. EV/ EBITDA 9. Price to Sales (P/S) Ratio 10. Special cases of valuation – IPOs, Financial Services firms, Net interest margin (NIM), Firms negative cash flows, Acquisition valuation, Distressed companies.

Options Trading Strategies Module

– Introduction to Options Concept of Options and Option Payoffs of buyers and sellers. – Option Strategies The 22 different option strategies covered are Long Call, Short Call, Synthetic Long Call, Long Put, Short Put, Covered Call, Long Combo, Protective Call, Covered Put, Long Straddle, Short Straddle, Long Strangle, Short Strangle, Collar, Bull Call Spread Strategy, Bull Put Spread Strategy,

Bear Call Spread Strategy, Bear Put Spread Strategy, Long Call Butterfly, Short Call Butterfly, Long Call Condor, Short Call Condor.

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OPERATIONS RISK MANAGEMENT MODULE

me a Introduction to Operations Risk A. Risk & Uncertainty B. The Financial Sector C. Risk Types D. Operations Risk E. Operations Risk Management 1. Recruitment & Training 2. Work Flow Design 3. Work Flow Documentation 4. Delegation of Authority 5. Independent Internal Audit 6. Independent Compliance Function 7. Independent Risk Management Function 8. Systems Audit 9. Corporate Governance 10. Whistle Blower Policy 11. Risk Management CultureC. Trades in Secondary Market A. Trade Intermediaries 1. Stock Broker 2. Trading Member (TM) 3. Clearing Member (CM) 4. Authorised Persons 5. Sub-brokers B. Screen-Based Trading System& D

C. NEAT System 1. Corporate Manager 2. Branch Manager 3. Dealer D. Order Management 1. Entering Orders 2. Modifying Orders 3. Cancelling Orders 4. Order Matching E. Trade Management

F. Risk Management in Trades – Clearing & Settlement of Trades. A. Transaction Cycle B. Clearing C. Settlement 1. Pay-in of Funds and Securities 2. Pay-out of Funds and Securities D. Settlement Risks 1. Counter-Party Risk 2. System Risk E. Risk Management F. Investor Protection. Workflow Design A. Front Office, Middle Office & Back Office B. Risk Events. BASEL Overview A. Bank for International

**Settlements (BIS) B. Basel Accords 1. Basel I 2. Basel II 3. BASEL III
C. Detailed Loss Event Type Classification – Basel II: Operational
Risk A. The Three Methods 1. Basic Indicator Approach 2. The
Standardised Approach 3. Advanced Measurement Approaches .**

**B. Mix of Three Methods C. SIGOR (June 2011) 1. Risk Appetite &
Risk Tolerance 2. ORMF & ORMS: Verification & Validation 3.
Embeddedness 4. Operational Risk Data 5. Gross Loss & Net Loss 6.
Dates 7. Distributions – Basel: Operational Risk Principles A.
Background B. The Principles a. Basel: Audit A. External Audit B.
Audit Committee C. Internal Audit.ta Analyst (BIDA)®**

Courses Taught by Banking & Credit Experts

**TREASURY MANAGEMENT MODULE – Treasury Management
Fundamentals A. Background B. Return Metrics C. Risk Metrics 1.
Standard Deviation 2. Beta 3. Weighted Average Maturity 4. Modified
Duration – Product / Exposure Structures A. Background B. Cash
Market C. Futures D. Forwards E. Options D. SWAPS 1. Interest Rate
Swap 2. Currency Swap 3. Credit Default Swap (CDS) 4. Swaption F.
SSELECTIVVELLY-Invest Classification Scheme for Investment
Products G. Off-Balance Sheet Exposures – Capital Structure &
Weighted Average Cost of Capital A. Background B. Capital
Structure C. Earnings, Interest and Debt Servicing D. Sources of
equity funds E. Cost of equity. F. Sources of debt funds G. Cost of
debt H. Weighted Average Cost of Capital I. Cost of Capital for
Trading Portfolios J. Leasing and hire purchase – Treasury
Management in Manufacturing and Services Companies A.
Background B. Contribution Analysis C. Operating Leverage &
Financial Leverage D. Balance Sheet E. Liquidity Management F.**

Foreign Exchange Exposures (Operations) G. Foreign Exchange Exposures (Loans taken or investments made) H. Commodity Exposures I. Credit Exposures – Treasury Management in Banking & Finance Companies **A. Background B. Capital Adequacy C. Balance Sheet D. Yield Curve and Spreads E. Credit Risk F. Interest Risk G. Re-financing Risk H. Asset-Liability Management I. Securitisation J. Foreign currency risk K. Equity Exposure** – Accounting Issues in Treasury Management **A. Background B. Long-term supply arrangements. C. Foreign Currency borrowing for a fixed asset D. Hedge and Hedged Instrument E. Investment types** – Treasury Management Processes and Risk Management in Treasury **A. Background B. Domestic Remittances C. International Remittances D. Liquidity Management E. Risk Management in Treasury.**

Insurance Module –

Introduction to Insurance 1. Definition of Insurance 2. Concept of Insurance / How insurance works 3. Insurance Act, 1938 4. Insurance Regulatory and Development Authority (IRDA) 5. Insurance Advertisements and Disclosures Regulations, 2000 6. Protection of Policy Holders Interest Regulations, 2002 7. Third Party Administrators (TPA) – Fundamentals of Risk Management **1. Definition of Risk 2. Classification of Risks 3. Definition of Risk Management 4. Stages of Risk Management** – Insurance Contract, Terminology, Elements and Principles **1. Contract Terminology 2. Elements of a Valid Contract – Offer and Acceptance, Consideration, Capacity, Legal Purpose 3. Distinguishing Characteristics of Insurance Contracts 4. Common clauses and sections in an insurance contract. General Insurance 1. Classification – Life Insurance & Non-Life Insurance 2. Non-Life Insurance classification – Property Insurance, Personal Insurance, & Liability Insurance. 3. Types of Property Insurance - Fire Insurance, Marine Insurance, Various types of Engineering Insurance. 4. Contractor's All Risks (CAR) Insurance 5. Marine cargo insurance 6. Features of motor insurance. 7. Burglary insurance 8. Money insurance** – Personal and Liability Insurance **1. Personal Insurance 2. Mediclaim Policies 3. Group Mediclaim policy 4. Personal Accident Insurance (PA) 5. Liability Insurance 6. Employers Liability Insurance 7. Public Liability Insurance 8. Professional Indemnity Insurance 9. Product Liability Insurance** – Financial Planning and Life Insurance **1. Financial Planning 2. Ratios as a tool for financial analysis 3.**

Definition of Life Insurance 4. Law of large numbers 5. Principles of Insurance and Life Insurance – Types of Life Insurance Policies 1. Term Insurance 2. Types of Term Life Insurance. 3. Whole Life Insurance 4. Endowment policy 5. Children’s policies 6. Annuities. 7. Group Insurance 8. Industrial Life Assurance 9. Life insurance premium and tax benefits – Insurance Intermediaries 1. Introduction 2. Individual agent 3. Corporate agent 4. Code of Conduct 5. Broking regulations 6. Indian Insurance Market.

Macroeconomics for Financial Markets Module

– Introduction to Macro Economics 1. Introduction 2. Microeconomics and Macroeconomics 3. Why Macroeconomics is important for the financial sector 4. The concept of ‘equilibrium’ in economics 5. Broad outline – Inflation and Interest Rates 1. What is inflation? 2. How to measure inflation? 3. Theories of inflation 4. Impact of inflation on macroeconomic variables 5. Controlling inflation 6. Interest Rates. 7. Factors affecting the level of Interest Rate 8. Impact of Interest Rates 9. Concept of Real Interest Rate – National Income Accounting 1. National Income Accounting: Measuring Economic Activity 2. Some other ways to measure National Income 3. Saving and Investment in India 4. The changing composition of India’s economic environment – Government and Fiscal Policy 1. Role of the Government in an Economy. 2. Government Expenditure and Revenue: Understanding the Government accounts 3. Bringing together the Revenue and the Expenditure side 4. The Deficit Indicators 5. Financing of deficit by the Government 6. Fiscal Deficit and sustainability of Internal Debt 7. Fiscal policies and their impact on the financial markets – Money and Monetary Policy 1. What is the role of Money? 2. Components of Money in India 3. Demand for Money 4. Supply of Money 5. Different roles of RBI in India 6. Role of Commercial Banks in Money Supply 7. Other Instruments of Money Supply 8. Market Stabilization Scheme 9. Use of Monetary policy 10. Use of Fiscal policy – The External Sector: Open Economy Macroeconomics 1. Why do countries trade? 2. India and International Trade 3. Balance of Payments 4. Foreign Direct Investment 5. Foreign Portfolio Investment. 6. Exchange Rates 7. Foreign Exchange Reserves 8. Impact of capital flows on money supply 9. Sterilization of Capital Flows – Financial Markets 1. Basic roles of the financial market 2. Why and how are financial markets different from other markets? 3. Role of different financial systems: Bank based financial systems and Capital Market based

financial systems 4. Role and contribution of different segments in India's Financial Market 5. The Equity Market 6. Derivatives Market in India 7. The Debt Market – Regulatory Institutions in India 1. Role of regulatory institutions in a market-based economy 2. The Reserve Bank of India (RBI) 3. The Securities and Exchange Board of India (SEBI) 4. Insurance Regulatory and Development Authority (IRDA) 5. Pension Fund Regulatory and Development Authority (PFRDA) 6. Forward Markets Commission (FMC) 7. Stock Exchanges in India.

- **NSDL Depository Operations Module**

An efficient depository is critical to the efficient functioning of the capital market. This module provides deep insight into the functioning of the depository and outlines the various operational issues. It has been mandated by the National Securities Depository Limited (NSDL) (which is one of the depositories in India), that all branches of depository participants must have at least one person qualified in this certification programme. This module has been jointly developed by NSE and NSDL.

- **To understand the rationale for a depository.**
- **To know about the services provided by a depository.**
- **To understand the processes involved in a depository's functioning.**
- **To understand the NSDL application software.**
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Commodities Market Module

– Introduction to Derivatives Introduction to Derivatives; types, Products, participants and functions; Exchange–traded versus OTC derivatives. – Application of Futures & Options Types of instruments (future, options)-Basics and Payoffs; Pricing commodity derivatives; Hedging, Speculation and Arbitrage – Commodity Derivatives Difference between commodity and financial derivatives; Global and Indian commodities exchanges; Evolution of commodity market in India. – NCDEX Platform Structure of NCDEX; Exchange membership; Capital requirements; Commodities traded on NCDEX

platform; Instruments available for trading; Pricing of commodity futures; Trading; Clearing, Settlement and Risk Management; Use of commodity futures in hedging, speculation and arbitrage. – Regulatory Framework & Taxation aspect Rules governing commodity derivatives exchanges; Intermediaries, Investor grievances and arbitration, Implications of sales tax.

Surveillance in Stock Exchanges Module –

Introduction Importance of surveillance in stock exchanges; Market surveillance mechanism. – Basic Investment Mathematics Return and risk, Fundamental analysis, Financial statement analysis, Cost of Capital, Capital structure, Capital budgeting, Time value of money; Market Index. – Rules and Regulations Securities Contracts Regulation Act, 1956 and Rules, 1957, Securities and Exchange Board of India Act, 1992, SEBI (Stock brokers & Sub Brokers) Regulations 1992, SEBI (Prohibition of Insider Trading) Regulations, 1992, SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 2011, SEBI (Prohibition of Fraudulent and Unfair Trade Practices) Regulations 2000, Prevention of Money Laundering Act 2000, Corporate Governance, Code of Ethics. – Investigation, Surveillance and Risk Management Preliminary analysis and investigation, Surveillance activities – online and offline surveillance and rumour verification, Risk containment measures.

TECHNICAL ANALYSIS MODULE

– INTRODUCTION TO TECHNICAL ANALYSIS 1.1 What is technical analysis? 1.1.1 Price discounts everything 1.1.2 Price movements are not totally random 1.1.3 Technical Analysis: the basic assumption 1.1.4 Strengths and weakness of technical analysis 1.1.4.1 Importance of technical analysis 1.1.4.2 Weaknesses of technical analysis – CANDLE CHARTS 2.1 The charts 2.2 Candlestick analysis 2.2.1 One candle pattern 2.2.1.1 Hammer 2.2.1.2 Hanging man 2.2.1.3 Shooting star and inverted hammer 2.2.2 Two candle pattern 2.2.2.1 Bullish engulfing 2.2.2.2 Bearish engulfing 2.2.2.3 Piercing 2.2.2.4 Bearish harami 2.2.2.5 Bullish harami 2.2.3 Three candle pattern 2.2.3.1 Evening star 2.2.3.2 Morning star 2.2.3.3 Doji – PATTERN STUDY 3.1 What are support and resistance lines Support 3.1.1 Resistance 3.1.2 Why do support and resistance lines occur? 3.1.3 Support and resistance zone. 3.1.4

Change of support to resistance and vice versa 3.1.5 Why are support and resistance lines important? 3.2 Head and shoulders 3.2.1 Head and shoulders top reversal 3.2.2 Inverted head and shoulders 3.2.3 Head and shoulders bottom 3.3 Double top and double bottom 3.3.1 Double top 3.3.2 Double bottom 3.3.3 Rounded top and bottom 3.4 Gap theory 3.4.1 Common gaps 3.4.2 Breakaway gaps 3.4.3 Runaway/continuation gap 3.4.4 Exhaustion gap 3.4.5 Island cluster – MAJOR INDICATORS & OSCILLATORS 4.1 What does a technical indicator offer? 4.1.1 Why use indicator? 4.1.2 Tips for using indicators 4.1.3 Types of indicator 4.1.4 Simple moving average 4.1.5 Exponential moving average 4.1.6 Which is better? 4.2 Trend following indicator 4.2.1 When to use? 4.2.2 Moving average settings 4.2.3 Uses of moving average 4.2.4 Signals - moving average price crossover 4.2.5 Signals - multiple moving average 4.3 Oscillators 4.3.1 Relative strength index 4.3.1.1 What is momentum? 4.3.1.2 Applications of RSI 4.3.1.3 Overbought and oversold 4.3.1.4 Divergence 4.3.1.5 Stochastic 4.3.1.6 William %R 4.3.1.7 Real life problems in use of RSI 4.3.1.8 Advanced concepts 4.3.2 Moving average convergence/divergence(MACD) 4.3.2.1 What is the macd and how is it calculate 4.3.2.2 MACD benefits 4.3.2.2 uses of MACD 4.3.2.3 Money Flow Index 4.3.2.4 Bollinger Bands 4.4 Using multiple indicators for trading signals 4.4.1 Price sensitive technique 4.4.2 Volume sensitive techniques 4.4.3 Composite methods 4.4.4 How to use tool kit of trading techniques 4.4.5 Trading market tool kit applications 4.4.6 Bull market tool kit application 4.4.7 Bear market tool kit application 4.4.8 Trading market changing to bull market tool kit application 4.4.9 Trading market changing to bear market tool kit application 4.4.10 Bull market changing to trading market tool kit application 4.4.11 Bear market changing to trading market tool kit application – TRADING STRATEGIES 5.1 Day trading 5.1.1 Advantages of day trading 5.1.2 Risks associated with risk day trading 5.2 Strategies 5.2.1 Strategies for day trading 5.2.2 Momentum trading strategies. DOW THEORY AND ELLIOT WAVE THEORY 6.1 Introduction 6.2 Principles of Dow Theory 6.3 Significance of Dow Theory 6.4 Problems with Dow Theory 6.5 Elliot Wave 6.5.1 Introduction 6.5.2 Fundamental Concept 6.5.3 After Elliot – TRADING PSYCHOLOGY AND RISK MANAGEMENT 7.1 Introduction 7.2 Risk Management 7.2.1 Components of risk management 7.2.1.1 Stop loss 7.2.1.2 Analyze reward risk ratio 7.2.1.3 Trail stop loss 7.2.1.4 Booking Profit 7.2.1.5 Uses of stop loss 7.2.1.6 Qualities of successful trader 7.2.1.7 Golden rules of traders 7.2.1.8 Do's and

don'ts in trading 7.3 Rules to stop losing money 7.4 Choosing the right market to trade 7.4.1 Importance of discipline in trading.

MERGERS AND ACQUISITIONS MODULE –

Introduction to Mergers & Acquisitions A. Background B. Types of Re-organisation 1. Internal Re-organisation 2. External Re-organisation C. Stock Swap D. Section 293 (1) (a) of the Companies Act, 1956 E. Sick Companies F. Benefits of Re-organisation G. Re-organisation Costs H. Due Diligence – Scheme of Compromise, Arrangement or Re-construction A. Definitions 1. Company 2. Arrangement 3. Unsecured Creditors 4. Appointed Date and Effective Date B. Power to compromise or make arrangements with creditors and members C. NCLT's Power to Enforce Compromise or Arrangement D. NCLT's Power for Facilitating Reconstruction or Amalgamation E. Dissenting Share-holders. F. Amalgamation in National Interest by Central Government – Buy-back of Securities A. Regulation and Definitions 1. Associate 2. Control 3. Small Shareholder 4. Tender Offer B. Permitted Methods of Buy-back C. Provisions in the Companies Act, 1956 D. Buy-back through Tender Offer E. Escrow Account in Tender Offer F. Payment to Security-holders in Tender Offer G. Buy-back from Open Market 1. Through stock exchange 2. Through Book-building Process H. General Obligations 1. Obligations of Company 2. Obligations of Merchant Banker – Substantial Acquisition of Shares & Takeovers A. Regulation and Definitions 1. Shares 2. Acquirer 3. Control. 4. Target Company 5. Persons Acting in Concert 6. Associate 7. Immediate Relative 8. Offer Period 9. Tendering Period B. Compulsory Open Offer 1. Substantial Acquisition of Shares or Voting Rights 2. Acquisition of Control 3. Indirect Acquisition C. Voluntary Offer D. Offer Size E. Offer Price F. Mode of Payment G. General Exemptions H. Exemptions by SEBI I. Manager to the Open Offer J. Timing of Public Announcement / Public Statement K. Dissemination of Public Announcement / Public Statement L. Contents of Public Notice / Public Statement M. Letter of Offer N. Escrow O. Other Procedural Requirements P. Conditional Offer. Q. Competing Offers R. Payment of Consideration S. Completion of Acquisition T. Withdrawal of Open Offer U. Other Obligations 1. Directors of Target Company 2. Acquirer 3. Target Company 4. Manager to the Offer V. SEBI Power

to Issue Directions – De-listing of Equity Shares A. Regulation and Definitions B. Situations where de-listing is not permitted C. Voluntary De-listing 1. Procedure where no exit opportunity is provided 2. Procedure where exit opportunity is required to be given D. Exit Opportunity E. Escrow F. Letter of Offer G. Bidding Period H. Share-holder Rights in Book-building Process I. Floor Price. J. Promoter's Right to Reject Offer Price K. Successful Voluntary Offer L. Payment of Consideration / Return of Equity Shares M. Share-holders' Rights Post-Offer N. Failure of Offer O. Post-Closure Announcement P. Compulsory De-listing Q. Share-holders' Rights in Compulsory De-listing R. Provisions for Small Companies S. Listing of de-listed shares – Valuation A. Background B. Valuation Methods 1. Market-based Methods 2. DCF-based Methods 3. Asset-based Methods – Accounting for Mergers & Acquisitions A. Regulatory Framework B. AS 14: Accounting for Amalgamations 1. Definitions 2. Types of Amalgamations 3. Pooling of Interests Method of Accounting 4. Purchase Method of Accounting. 5. Consideration 6. Reserves 7. Goodwill 8. Profit & Loss a/c Balance 9. Disclosures 10. Amalgamation after Balance Sheet Date C. AS 10: Accounting for Fixed Assets D. AS 26: Intangible Assets E. ASI 11: Accounting for Taxes on Income in case of an Amalgamation F. Ind AS 103: Business Combinations – Taxation A. Definitions 1. Amalgamation 2. Demerger B. Capital Asset – Long Term or Short Term C. Transactions not treated as a transfer D. Capital Gains Tax E. Securities Transaction Tax (STT) F. Block Deals G. Slump Sale H. Sale Consideration – Special Cases I. Notional Cost – Special Cases J. Depreciation on Transferred Assets K. Telecom License Transfer L. Preliminary Expenses. M. Amalgamation / Demerger Expenses N. Carry forward and Set off of Loss and Depreciation 1. Amalgamation 2. Demerger.

BACK OFFICE OPERATIONS MODULE

– Know Your Client, Anti-Money Laundering & Combating Financing of Terrorism A. Principles B. Client Due Diligence C. Customer Policy D. Clients of Acceptance Special Category (CSC) E. Client Identification Procedure (CIP) F. Client Registration 1. Proof of Identity (POI) 2. Proof of Address (POA) 3. PAN Card 4. Additional Requirements for non-individuals 5. Unique Client Code 6. Power of Attorney (POA) 7. Nomination G. Changes in Client Information 1. Change of Address 2. Change in Bank Details 3. Change in

Signatory. 4. Minor becoming major H. KYC Registration Agencies (KRA) I. Suspicious Transactions Reporting (STR) J. Designated Individuals & Entities K. Record Keeping – Primary Market A. Types of Issues 1. Public Issue - IPO 2. Public Issue – Follow-on Offering 3. Public Issue – Offer for Sale 4. Rights Issue 5. Bonus Issue 6. Private Placement 7. GDR / ADR Issues 8. Sponsored GDR / ADR Issues 9. Foreign Currency Convertible Bond (FCCB) Issues 10. India Depository Receipts B. Public Issue Process C. Time-line for Public Issue D. Common Bid-cum-Application Form. E. ASBA F. Buy Back of Securities – Secondary Market (Trading in Shares) A. National Stock Exchange B. Trading Members & Clearing Members C. Authorised Persons & Sub-brokers D. Trading Member’s Responsibilities for Trades E. Uniform Documentation for Opening Trading Account F. Screen-based Trading System (SBTS) G. Trade Management H. Market Types 1. Normal Market 2. Auction Market 3. Odd Lot Market 4. Retail Debt Market I. Margin Trading J. Exchange Margins K. Settlement 1. Clearing House 2. Other Agencies Involved in Settlement. 3. Clearing Mechanism 4. Clearing Process 5. Settlement Process 6. Transaction Cycle 7. T+2 Rolling Settlement Calendar 8. Delivery Versus Payment (DVP) / Hand Delivery 9. Auction Settlement 10.F&O Settlement 11.Books of Accounts 12.Straight Through Processing (STP) – Depository Operations A. Depository and Issuer B. Depository Participant C. Transactions 1. Account Opening 2. De-materialisation 3. Re-materialisation 4. Secondary Market Purchases 5. Secondary Market Sales. 6. Standing Instructions 7. Power of Attorney (PoA) 8. Transposition 9. Transmission of Securities 10.Dividends 11.Pledging Securities 12.Freezing of Accounts 13.SMS Alerts – Registrar & Transfer Agent A. Role & Responsibilities B. Voting Rights in Companies C. Dividend Payments in Companies D. Physical Shares 1. Transfer Deed 2. Delays in Transfer of Shares by Companies 3. Good and Bad Delivery Norms – Mutual Fund: AMC Operations A. Legal Structure B. Net Asset Value (NAV). C. Expenses D. Load E. Offer Documents F. Investor Transactions (Normal Physical Mode) 1. Acquisition of Units by Investor from the Scheme 2. Sale of Units by Investor to Scheme 3. Secondary Market Transactions in Units by Investor 4. Redemption of Units on closure of scheme 5. Additional Purchase by Investor 6. Switch by Investor 7. Systematic Investment Plan 8. Systematic Withdrawal Plan 9. Systematic Transfer Plan Investor Transactions (Through the Internet) G. Investor Transactions (NSE MFSS Channel) H. Dividend Options 1. Dividend Payout Option 2.

Growth Option 3. Dividend Re-investment Option I. Dividend Mechanics J. Income Distribution Tax. K. Securities Transaction Tax (STT) L. Cut-off Time Regulations 1. Liquid Schemes & Plans - Subscriptions 2. Liquid Schemes & Plans – Re-Purchases 3. Other than Liquid Schemes & Plans - Subscriptions 4. Other than Liquid Schemes & Plans – Re-purchases M. Official Points of Acceptance (PoA) N. Time Stamping O. RTA Role P. Distributors' Commission Q. Bank Accounts R. Other Back Office Activities – Mutual Fund Transactions through NSE A. Listed Schemes B. Exchange Traded Funds (ETFs) C. Mutual Fund Service System (MFSS) a. Subscription (Physical mode) b. Subscription (Demat mode) c. Redemption (Physical mode) d. Redemption (Demat mode). Qualified Foreign Investors – Equity Shares A. Background B. Permitted Transactions C. Investment Restrictions D. Administration of Investment Limit E. Other Conditions F. Transaction Flow – Qualified Foreign Investors – Mutual Funds A. Background B. Investment Limit C. Transaction Flow 1. Direct Route (Demat) 2. Indirect Route (Unit Confirmation Receipts – UCR) D. Other Conditions.

WEALTH MANAGEMENT MODULE –

Introduction to Financial Planning a. Background b. Role of Financial Planner c. Financial Planning Process d. Contract and Documentation e. Client Data Collection f. Client Data Analysis g. Life Cycle h. Wealth Cycle i. Risk Profiling and Asset Allocation j. Systematic Approach to Investing i. Systematic Investment Plan (SIP) ii. Systematic Withdrawal Plan (SWP) iii. Systematic Transfer Plan (STP) k. Financial Plan i. Goal-based Financial Plan ii. Comprehensive Financial Plan l. Financial Blood-Test Report (FBR) m. Financial Planning in India – Wealth Management & The Economy a. Financial Planning to Wealth Management b. Economic Cycles and Indicators i. Lag Indicators ii. Co-incident Indicators iii. Lead Indicators c. Interest Rate Views d. Currency Exchange Rate. e. The Deficits i. Revenue Deficit and Fiscal ii. Current Account Deficit – Investment & Risk Management: Equity a. Role of Equity b. Active and Passive Exposures c. Returns from Passive Exposure to S&P CNX Nifty d. Sector Exposure and Diversification e. Fundamental and Technical Analysis f. Fundamental Valuation Approaches g. Investment and Speculation h.

Leveraging – Investment & Risk Management: Debt a. Role of Debt b. Deposits and Debt Securities c. Valuation of Debt Securities d. Yields and Interest Rate Risk e. Interest Rate and Debt Investments f. Credit Exposure and Debt Investments g. Concentration Risk h. Passive Investments in Debt – Investment & Risk Management: Alternate Assets a. Gold i. Role of Gold ii. Gold Investment Routes iii. Rupee returns from Gold b. Real Estate i. Role of Real Estate ii. Real Estate Investment Routes iii. Real Estate Indices – a. Derivatives. i. Futures ii. Options b. Mutual Fund c. Venture Capital / Private Equity Funds d. Hedge Funds e. Structured Products f. Portfolio Management Services (PMS) – Investment Evaluation Framework a. Risk-Return Framework b. Risk i. Standard Deviation ii. Beta c. Risk Adjusted Returns i. Sharpe Ratio ii. Treynor Ratio iii. Alpha d. SECTIVELY-Invest Classification Scheme for Investment Products – Risk Profiling & Asset Allocation a. Risk Profiling b. Why Asset Allocation? c. Strategic Asset Allocation d. Tactical Asset Allocation e. Fixed Asset Allocation f. Flexible Asset Allocation g. Asset Allocation Returns in Equity and Debt i. Fixed Asset Allocation with Annual Re-balancing ii. Flexible Asset Allocation h. Asset Allocation Returns in Equity, Debt and Gold i. Fixed Asset Allocation with Annual Re-balancing ii. Flexible Asset Allocation i. Allocation to Speculation. j. Diversification in Perspective – Risk Management through Insurance a. Risk Assessment b. Life Insurance c. Health Insurance d. General Insurance e. Safeguards in Insurance – Elements of Taxation a. Previous Year and Assessment Year b. Gross Total Income c. Income Tax Slabs d. Advance Tax e. Tax Deducted at Source (TDS) f. Exempted Income g. Deductions from Income i. Section 80C ii. Section 80CCC iii. Section 80CCD iv. Section 80D v. Section 80E vi. Section 80GG h. Long Term and Short Term Capital Gain / Loss i. Speculation Profit / Loss j. Capital Gains Tax exemption under Section 54EC k. Capital Gains Tax exemption under Section 54F l. Setting Off & Carry Forward – Taxation of Investment Products a. Dividend Tax / Tax on Income Distributed by Mutual Fund b. Securities Transaction Tax (STT) c. Capital Gains Taxation d. Taxation of Fixed Deposits and Fixed Maturity Plans i. Fixed Deposits ii. Fixed Maturity Plans (FMP) e. Dividend and Growth Options in Mutual Fund schemes. f. Wealth Tax. – Estate Planning a. Background b. Assets & Liabilities c. Nomination d. Inheritance Law e. Will f. Trust.

PROJECT FINANCE MODULE –

Project Finance Background a) Evolution of project finance b) Project Types c) Critical steps in a project – Market Analysis a) Background b) Market Sizing: (i) Demand function estimation (ii) Rule of Thumb (iii) Experts' Poll c) Consumer, Customer and Influencer d) Market Insight areas e) Market Research Approaches f) Data Cleaning and Analysis – Business Model, Competencies and Promoter Analysis a) Business Model b) Competencies: (i) Core competency (ii) Competency Match c) Promoter Analysis: (i) Track Record (ii) Financial Standing (iii) Integrity – Estimating Cost of Project a) Project specifications b) Estimating Fixed Capital Investment in Project c) Estimating working capital investment in the project – Project Feasibility Analysis a) Background. b) Net Present Value (NPV) c) Profit v/s Cash Flow d) Discount Rate e) Tax-Shield on Interest f) Tax-Shield on depreciation g) Internal Rate of Return (IRR) h) XIRR i) MIRR j) Project IRR and Equity IRR k) Payback Period l) Discounted payback period m) Economic IRR – Financial Projections a) Background b) Assumptions c) Cost of Project & Means of Financing d) Projected Profit & Loss Account e) Projected Balance Sheet f) Projected Funds Flow g) Project IRR h) Equity IRR i) Loan Servicing Capability: (i) Interest Coverage Ratio (ICR) (ii) Debt Service Coverage Ratio (DSCR) (iii) Long Term Debt Service Coverage Ratio (LDR) j) Sensitivity Analysis k) Building Scenarios – Project Finance and their Sources a) Prudence in Mix of Long Term and Short Term Finance b) Forms of Long Term Project Finance c) Forms of Short Term Project Finance d) Lease. e) Role of Non-Banking Finance Companies (NBFC) f) Loan Documentation – Infrastructure and Public Private Partnerships a) Background b) PPP Models c) Parties to a PPP Model d) PPP Process e) Model Concession Agreements (MCA): (i) Highways (ii) Greenfield Airports (iii) Transmission of Electricity – Novel Structures in Infrastructure Finance a) Background b) Take-out Financing c) Securitisation d) Viability Gap Financing (VGF) e) Infrastructure Debt Fund f) High Level Committee on Financing of Infrastructure – Taxation and Incentives a) Taxation: (i) Depreciation (ii) Amortisation of Preliminary Expenses (iii) Amortisation of Telecom License Fees (iv) Interest on borrowed capital (v) Disallowances under the Act (vi) Expenses, in General (vii) Compulsory Audit b) Incentives c)

Maharashtra Package Scheme of Incentives – Project Risks and their mitigation a) Background. b) Project Conceptualisation Risk c) Financial Closure Risk d) Project Construction Risk e) Political Risk f) Market Risk g) Supply Chain Risk h) Policy Risk i) Exchange Risk j) Environmental Risk k) Force Majeure.

VENTURE CAPITAL AND PRIVATE EQUITY MODULE

– Private Equity Background • Evolution of Finance for Business • VC Funds and PE Funds • Fund Structure • Leveraging in Funds • Forms of Investment by Funds • J Curve • Measuring the Performance of Investments and PE Fund – Getting Ready for Growth Capital from Funds • PE Investment Criteria • Role of Facilitators • Resource Mobilization, Valuation & Dilution – Business Model, Business Plan & Financial Model • Business Model • Business Plan • Financial Model o Background o Assumptions o Cost of Project & Means of Financing o Projected Profit & Loss Account o Projected Balance Sheet o Projected Funds Flow o Project IRR o Equity IRR o Loan Servicing Capability o Valuation o Sensitivity Analysis o Building Scenarios. Buyouts and other Transactions • LBO • MBO • Project-based Funding Transactions • Distressed Assets Funding Transactions – PE Investment Process • Sourcing of Proposals • Initial contact / Flier • Non-Disclosure Agreement (NDA) • Information Memorandum • Management Presentation • Initial Due Diligence • Preliminary Investment Note • Non-binding Letter of Intent • Final Due Diligence • Final Investment Memorandum • Signing the Term Sheet • Closure of the Deal – Documentation and Typical Investment Conditions • Typical Investment Conditions • Subscription Agreement • Shareholders' Agreement – Tax Aspects of PE Investment • Section 10(23FB) of Income Tax Act, 1961 • Section 10(47) of Income Tax Act, 1961 • Income Types • Securities Transaction Tax (STT) • Tax on Distributed Profit (Dividend Distribution Tax) • Taxability of Interest • Taxability of Short Term Capital Gains on Debt. Taxability of Long Term Capital Gains on Debt • Taxability of Short Term Capital Gains on Equity • Taxability of Long Term Capital Gains on Equity • Taxation of Non-Residents – Post-Investment Support, Monitoring and Exit • Support • Monitoring • Exit – EMERGE: NSE's Platform for SMEs • Emerge Introduction • Benefits of Listing for Companies • Benefits of Listing for Investors • Eligibility Criteria • Listing Requirements • Listing Fees • Selecting a Merchant Banker for the Issue • Role of Merchant Bankers in

Emerge • Role of Market Makers in EmERGE • The EmERGE Trading Platform

- **NSE Certified Quality Analyst Module**
- **To understand how quality relates to a professional in the finance world**
- **To understand the business relevance of Customer Focus and Quality**
- **To learn to apply data analysis and decision making tools in everyday work**
- **To develop an understanding of various popular problem solving tools and methodologies and learn a systematic approach to Quality Improvement**
- **To learn how to calculate productivity, and identify & eliminate different types of waste in the process**
- **To gain recognition through the coveted NCFM certification process.**

NCFM Advanced Modules

Information Security Services Professionals

- **To understand the regulatory, legal and compliance issues in information security for financial markets.**
- **To know the provisions for business continuity plan.**
- **To understand the security management practices and physical and environmental security.**

ALGORITHMIC TRADING MODULE –

Introduction to Algorithmic Trading • Evolution of Algorithmic Trading • What is Algorithmic Trading? • Different Trading Methodologies • Trends in Algorithmic Trading: Global and India • Benefits of Algorithmic Trading – Order Types • Different Order Types • Execution Trading Strategies – Trading Strategies • Calendar Spread • Cash Future Arbitrage Strategy • Index Arbitrage • Pair Trading • News Based Trading Strategies • Conversion- Reversal – Algorithmic Trading: System Architecture • Market Data • CEP Engine

• **Order Routing / Order Manager** • **Colocation** • **Smart Order Routing (SOR)** • **Connectivity Options** → **Risk management in Algorithmic Trading** • **Different Stages involved in Risk Management** • **Risk Management Specific to High Frequency & Algorithmic Trading**. **Audit and Compliance process** • **International Organization of Securities Commissions** • **Auditing Process and Requirements (As defined by NSE for member-broker)** • **SEBI Recommendations on Algorithmic Trading** • **Software Testing and Empanelment** • **Exchange Audits** • **Technology and System Audit** • **Compliance Requirements.**

FINANCIAL MARKETS (ADVANCED) MODULE

→ **Financial Markets, Products & Institutions** **A. Financial Markets** **B. Financial Products and Market Entities** **C. Market Infrastructure** **Institutions** **D. Conflicts of Interest** → **Quantitative Background to Debt** **A. The Nature of Debt** **B. The Price of a Debt Security** • **Perpetual Debt** • **Discount Instrument** • **Coupon Instrument** **C. Price-Yield Relationship of a Debt Security** **D. Modified Duration of a Debt Security** → **Debt – Investment Drivers & Approaches** **A. Interest Risk** • **Forward Rates** • **Yield Curve Estimation** • **Shape of Yield Curve** • **Debt Portfolio Structures** **B. Credit Risk & Yield Spreads** • **Assessment of Sovereign Debt Servicing Ability** • **Assessment of Private Debt Servicing Ability**. **Credit Rating** • **Structured Obligations** • **Yield Spread & Changes in Credit Risk** → **Financial Statements: Analysis & Projections for Equity** **A. Financial Statement Analysis** • **Revenue, Cost & Margin Structure** • **Capital Efficiency** • **Dividend Yield** • **Price – Earnings Ratio** **B. Financial Projections** → **Equity – Valuation & Investment Decisions (Part 1)** **A. Required Rate of Return on Equity** **B. Weighted Average Cost of Capital (WACC)** **C. Fundamental Valuation Approaches** • **Dividend Discounting** • **Free Cash Flow** • **Enterprise Value** • **Earnings Multiple** • **Price to Book Value Multiple** **D. Margin of Safety** → **Equity – Valuation & Investment Decisions (Part 2)** **A. Economy & Industry Analysis** • **Economy Analysis** • **Industry Analysis**. **B. Top-Down or Bottom-up?** **C. Technical Analysis** → **Derivatives** **A. Background** **B. Interest Rate Futures** **C. Credit Default Swaps (CDS)** **D. Currency Futures** **E. Currency Options** **F. Equity Futures & Options** → **Alternate Assets & Structured Products** **A. Alternate Assets** • **Gold** • **Real Estate** **B. Structured Products** • **Portfolio Insurance** • **Risks** •

SEBI Regulations – International Markets A. Depository Receipts B. International Stock Indices • S&P 500 Index (SPX) • Dow Jones Industrial Average (INDU) • NASDAQ Composite Index (CCMP) • EURO STOXX 50 Price Eur (SX5E) • FTSE 100 (UKX) • Deutsche Borse AG German Stock Index DAX (DAX) • Nikkei 225 (NKY) • Tokyo Stock Exchange Tokyo Price Index TOPIX (TPX) • Hong Kong Hang Seng Index (HSI) C. Feeder Funds D. Trading in Global Markets through NSE • Futures & Options • Exchange Traded Funds (ETFs) – New Paradigms in Regulation of Financial Markets A. Market Infrastructure Institutions B. Alternate Investment Funds C. Standardisation of Rating Symbols and Definitions D. Investment Advisers E. Commission on Public Issues of Debt F. Merchant Bankers' Track Record G. Algorithmic Trading H. Outsourcing by Intermediaries I. Qualified Foreign Investors (QFIs) J. KYC Registration Agency (KRA).

Securities Market (Advanced) Module –

INTRODUCTION TO CAPITAL MARKET A. Fundamental Role • Equity capital • Debt capital • Preference capital B. Capital Market Segments • Primary market • Secondary market C. Products / Instruments • Differential Voting Rights (D VR) Shares • Global Depository Receipt (GDR) / American Depository Receipts • (ADR) Con veritable Preference Shares • Debentures / Bonds • Foreign Currency Convertible • Bonds Government Securities • Treasury Bills • Certificate of Deposit (CD) • Commercial Pares (CP) • Call Money / Notice Money / Term Money Rep o / reverse repo D. Institutions & Intermediaries E. Indices F. Capital Assets Pricing Model (CAPM) G. Reforms in Indian Securities Markets – FUNDAMENTAL ANALYSIS OF EQUITY A. Purpose. 1. Fundamental Analysis 2. Technical Analysis B. Financial Statement Analysis 1. Ratios commonly tracked by company's Shareholders Ratios to asses. 2. Company's Margins 3. Asses Company's Capital Structure Ratios to asses 4. Company's Solvency 5. Ratios to asses company's Assets & Liabilities Efficiency 6. Ratios to Asses Company' Return Generation Efficiency B. Sector-Specific Ratios – PRIMARY MARKETS PROCESS A. Typical Fund

Raising Stages B. IPO Process C. Why IPO? → MEMBERSHIP ON EXCHANGES A. Stock Broker B. Trading Members C. Clearing Members D. Membership Norms E. Trading Membership – Admission Procedure F. Trading Membership – Surrender Procedure G. Trading Membership – Suspension & Expulsion H. Authorized Persons.

DERIVATIVES (ADVANCED) MODULE →

Derivatives & Quantitative Fundamentals – A Backgrounder A. Derivative Types B. Beta C. R-Square D. Continuous Compounding E. Option Valuation 1. Historical Volatility (σ) F. Normal Distribution G. Share Prices – Lognormal Distribution H. Volatility (σ) • ARCH(m) Model • Exponentially Weighted Moving Average (EWMA) • GARCH Model • Implied Volatility → Fundamentals of Equity Futures A. Contracts B. Selection Criteria • Stock Selection Criteria • Criteria for Continued Eligibility of Stock • Criteria for Re-inclusion of Excluded Stocks • Index Selection Criteria C. Price Steps and Price Bands for Contracts D. Quantity Freeze for Futures Contracts E. Novation F. Margins G. Daily Mark-to-Market Settlement H. Final Settlement I. Cost of Carry. J. Determining Stock Futures Price (without Dividend) K. Determining Stock Futures Price (with Dividend) L. Determining Index Futures Price (without Dividend) M. Determining Index Futures Price (with Dividend) N. Cash & Carry Arbitrage O. Reverse Cash & Carry Arbitrage P. Convergence of Spot & Futures Q. Contango & Backwardation R. Cost of Carry - Commodities → Investment with Equity Futures A. Relation between Futures and Spot Price B. Payoff Matrix from Futures • Long Futures • Short Futures C. Hedging with Futures D. Basis Risk E. Modifying the Portfolio Beta with Futures F. Rolling Hedges G. Investment Strategies Using Futures → Interest Rate Futures A. Interest Risk Management through Futures B. Contracts & Eligible Securities C. Conversion Factor D. Cheapest to Deliver (CTD) E. Contract Structure & Mechanics of FUTIRD F. Contract Structure & Mechanics of FUTIRT → Black-Scholes Option Pricing Model A. European Call Option B. European Put Option. C. Dividends D. American Options → Option Greeks A. Delta • European Call on non-dividend paying stock • European Put on non-dividend paying stock • European Call on asset paying a yield of q • European Put on asset paying a yield of q B. Gamma • European Call / Put on

non-dividend paying stock • European Call / Put on asset paying a yield of q C. Theta • European Call on non-dividend paying stock • European Put on non-dividend paying stock • European Call on asset paying yield of q • European Put on asset paying yield of q D. Vega • European Call / Put on non-dividend paying stock • European Call / Put on asset paying yield of q E. Rho • European Call on non-dividend paying stock • European Put on non-dividend paying stock → Currency Futures & Options A. Currency Futures Contracts B. Calculation of Daily Settlement Price of Currency Futures C. Transactions in Currency Futures D. Currency Futures or Forward Rate Agreement E. Currency Options Contracts F. Valuation of Currency Options. European Call Option • European Put Option G. Transactions in Currency Options → Swaps A. OTC Products B. Interest Rate Swap C. Valuing Interest Rate Swaps • Valuation based on Bonds • Valuation based on Forward Rate Agreements (FRAs) D. Currency Swap E. Valuing Currency Swaps F. Swaption → Embedded Options in Debt Instruments A. Warrants B. Convertible Bonds C. Call Option in a Debt Security D. Put Option in a Debt Security E. Put & Call Option in a Debt Security F. Caps G. Floors H. Collars → Credit Risk & Derivatives A. Credit Risk & Rating B. Default History & Recovery Rates C. Calculation of Default Risk • Simple Approach • Present Value Approach D. Mitigating Credit Risk E. Credit Default Swaps F. Collateralized Debt Obligation (CDO).

Mutual Funds (Advanced) Module →

Mutual Funds in perspective • Mutual Funds • Portfolio Management Schemes (PMS) • Hedge Funds • Venture Capital Funds & Private Equity Funds → Investments by Mutual Fund Schemes • Equity • Debt • Derivatives • Gold • Real Estate • International Investments → Valuation of Investments by Mutual Fund Schemes • Equity: (i) Traded Securities (ii) Non-Traded / Thinly Traded / Unlisted Equities (iii) Warrants (iv) Rights • Debt: (i) Money market and debt securities with residual maturity of upto 91 days. (ii) Money market and debt securities with residual maturity of over 91 days (iii)

Provisioning for Non-Performing Assets (NPA) (iv) Re-classification of Non-Performing Assets (NPA) and (v) Provisioning & Re-classification in case of rescheduling. • Gold • Real Estate – Mutual Fund Accounting • Accounting for Income, Gains & Losses from investments • Accounting for expenses • Determining the NAV. Accounting for Load • Distributable Reserves – Novel Portfolio Structures in Mutual Fund Schemes • Index Funds • Exchange Traded Funds (ETFs) • Arbitrage Funds • Monthly Income Plans (MIP) • Fixed Maturity Plans (FMP) • Capital Protecting Oriented schemes – Quantitative Evaluation of Mutual Fund Schemes • Returns – XIRR Dividend Re-investment (CGR), Compounding of periodic returns • Risk – (i) Standard Deviation (ii) Beta (iii) Weighted Average Maturity (iv) Modified Duration • Risk Adjusted Returns – (i) Sharpe ratio (ii) Sortino ratio (iii) Treynor ratio (iv) Jensen's Alpha. – Cut-off Time Regulations & Time Stamping • Cut off Timing: (i) Liquid schemes & plans – Subscriptions (ii) Liquid schemes & plans – Repurchase (iii) Other than Liquid schemes & plans – Subscriptions (iv) Other than Liquid schemes & plans – Re-purchases • Official Points of Acceptance (PoA) • Time Stamping requirements – Investment in Mutual Funds through Exchange • Listed Schemes • Exchange Traded Funds (ETFs) • Mutual Fund Service System (MFSS) – (i) Subscription (Physical mode) (ii) Subscription (Demat mode) (iii) Redemption (Physical Mode) (iv) Redemption (Demat Mode. Non-Resident Investment in Indian MF Schemes • Investment by NRIs / PIOs – repatriable basis and non-repatriable basis • Investment by Foreign Institutional Investors • Investment by Qualified Foreign Investors – (i) Direct Route (Demat) (ii) Indirect Route (Unit Confirmation Receipts – UCR) – Investment by Indians in International MF Schemes • Foreign Direct Investment and Portfolio Investment • Investing in International Mutual Fund Schemes – (i) Need to understand the international financial market (ii) Need to understand regulations regarding permissible investment (iii) Need to understand regulations regarding taxation (iv) Need to understand regulations regarding repatriation (v) Foreign currency risk (vi) Transaction costs • Why invest abroad? • International Fund of Funds – Mutual Fund Taxation • Mutual Fund Tax Provisions – (i) Securities Transaction Tax (STT) (ii) Capital Gains Tax (iii) Tax on Income Distributed (iv) Tax deducted at source (TDS) / withholding

tax • Compounding Wealth, Gross of Tax – (i) Bank Fixed Deposit (ii) Mutual Fund • Dividend Payout and Growth Options within schemes • Double Indexation • Setting Off & Carry Forward of losses • Dividend stripping – SID, SAI, KIM and Fact Sheets • Scheme Information Document (SID) • Statement of Additional Information (SAI) • Key Information Memorandum (KIM) • Fund Account Statements / Consolidated Statement of Accounts • Fact Sheets.

OPTIONS TRADING (ADVANCED) MODULE –

Options – A Backgrounder A. Derivative Types B. Continuous Compounding C. Option Valuation D. Option Pricing Band i. Upper Bound: Call Option ii. Upper Bound: Put Option iii. Lower Bound: Call Option iv. Lower Bound: Put Option E. Put-Call Parity: European Options i. Position A undervalued ii. Position B Undervalued F. Put-Call Parity: American Options G. Dividends – Quantitative Concepts – A Backgrounder A. Normal Distribution B. Share Prices – Lognormal Distribution C. Linkages that arise from the Distribution D. Volatility (σ). Binomial Option Pricing Model A. Single Period Binomial B. Multiple Period Binomial C. European Put Option D. Binomial Model for American Options E. Role of Volatility in ‘u’ and ‘d’ – Black-Scholes Option Pricing Model A. European Call Option B. European Put Option C. Dividends D. American Options – Option Greeks • Delta 1. European Call on non-dividend paying stock 2. European Put on non-dividend paying stock 3. European Call on asset paying a yield of q 4. European Put on asset paying a yield of q • Gamma 1. European Call / Put on non-dividend paying stock 2. European Call / Put on asset paying a yield of q • Theta 1. European Call on non-dividend paying stock 2. European Put on non-dividend paying stock 3. European Call on asset paying yield of q . 4. European Put on asset paying yield of q • Vega. 1. European Call / Put on non-dividend paying stock 2. European Call / Put on asset paying yield of q • Rho 1. European Call on non-dividend paying stock 2. European Put on non-dividend paying stock – Volatility • Historical Volatility (σ) • ARCH(m) Model • Exponentially Weighted

Moving Average (EWMA) • GARCH Model • Implied Volatility → Basic Option & Stock Positions A. Pay-off Matrix for Basic Option Positions • Long Call • Short Call • Long Put • Short Put B. Pay-off Matrix for Position in the Share • Long Stock • Short Stock C. Assumptions D. A Few Option Contract Intricacies → Option Trading Strategies A. The Strategies 1. Single Option, Single Stock i. Protective Put. ii. Covered Put iii. Covered Call iv. Protective Call 2. Multiple Options of Same Type i. Bull Spread ii. Bear Spread iii. Butterfly Spread iv. Calendar Spread v. Diagonal Spread 3. Multiple Options of Different Types i. Straddle ii. Strangle iii. Collar v. Range Forward - Long vi. Range Forward – Short vii. Box Spread viii. Condor B. Option Chain C. Contract Fundamentals D. Option Trading Intricacies 1. Choice of Strike Price 2. Choice of Expiry 3. Roll Over and Covered Calls → Exotic Options A. Asian Option B. Bermudan Option C. Compound Option. D. Binary Option E. Barrier Option F. Look back Option G. Shout Option H. Chooser Option → Market Indicators A. Put-Call Ratio B. Open Interest C. Roll-over D. Volatility.

THANK YOU

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