Certificate in Currency & Commodity Markets

Syllabus

Module 1: Foundations of Currency and Commodity Markets

- Role of currency and commodity markets in the global economy
- Currencies and commodities as asset classes: distinctive features and risks
- Spot, forward, futures, options and swap markets: an overview
- Over-the-counter versus exchange-traded markets
- Market participants: central banks, banks, corporates, producers, consumers, traders, funds and retail investors
- Hedgers, speculators and arbitrageurs
- Sources of currency and commodity exposure for businesses and investors
- Leverage, margin and mark-to-market
- Key risks: market, liquidity, counterparty, operational and regulatory
- Evolution of currency and commodity markets in India

Module 2: Foreign Exchange Market Structure

- Size, structure and trading centres of the global FX market
- Interbank, merchant and retail segments
- Currency pairs, base and quote currencies, majors, crosses and emerging-market currencies
- Direct and indirect quotations, bid-ask spreads and pips
- Dealing conventions, value dates and settlement cycles
- Electronic trading platforms, brokers and market makers
- Authorised dealers and money changers in India
- FX reference and benchmark rates, including FBIL reference rates
- Settlement and clearing infrastructure: CCIL and CLS
- The offshore rupee market and non-deliverable forwards

Module 3: Exchange-Rate Determination

- Exchange-rate regimes: fixed, floating and managed float
- Balance of payments: current account, capital account and reserves
- Purchasing power parity: absolute and relative
- Interest rate parity: covered and uncovered
- International Fisher effect
- Real and nominal effective exchange rates
- Monetary policy, inflation and growth differentials
- Capital flows: FDI, FPI, remittances and external borrowing
- Central-bank intervention and foreign-exchange reserves
- Technical, flow-based and sentiment-based approaches to currency forecasting

Module 4: Spot and Forward Foreign Exchange

- Spot transactions and settlement
- Cross-rate calculation and triangular arbitrage
- Forward contracts: outright forwards and forward points
- Forward premium and discount, and annualised forward premium
- Pricing forwards using interest rate parity
- Cash, tom and spot rates
- FX swaps: structure, pricing and uses
- Cancellation, rollover and early delivery of forwards
- Non-deliverable forwards and fixing mechanisms
- Calculating hedged and unhedged outcomes

Module 5: Currency Futures and Options

- Exchange-traded currency futures in India: contracts, lot sizes and tick values
- Futures pricing, basis and convergence
- Margining: initial margin, mark-to-market and SPAN
- Currency options: calls, puts, premiums, strikes and expiry
- Intrinsic value, time value and moneyness
- Factors that affect option premiums, including volatility and interest differentials
- Option Greeks: delta, gamma, vega, theta and rho
- Put-call parity for currency options
- OTC currency options and exotic structures: barriers and range forwards
- Option strategies: protective puts, covered calls, collars, straddles and strangles

Module 6: Currency Swaps and Cross-Border Financing

- Cross-currency swaps: structure, exchange of principal and interest
- Coupon-only swaps and principal-only swaps
- Pricing and valuation of currency swaps
- External commercial borrowings and the hedging of foreign-currency debt
- Trade credit, buyer's credit and supplier's credit
- Masala bonds and rupee-denominated borrowing
- Foreign-currency convertible bonds
- Hedging cost and its effect on the all-in cost of borrowing
- Counterparty and settlement risk in swaps
- Case studies in cross-border financing

Module 7: Corporate Treasury and Currency Risk Management

- Types of currency exposure: transaction, translation and economic
- Identifying, measuring and netting exposures
- Natural hedging, leading and lagging, and invoicing currency
- Designing a hedging policy: hedge ratios, tenors and approval limits
- Choosing between forwards, options and swaps
- Measuring hedge effectiveness
- Value at risk and stress testing for currency portfolios
- Treasury organisation: front office, middle office and back office
- Hedging for exporters, importers, IT services companies and borrowers
- Lessons from currency-derivative losses and mis-selling cases

Module 8: Indian Foreign Exchange Regulatory Framework

- Foreign Exchange Management Act, 1999: objectives and structure
- Current-account and capital-account transactions
- Role of the RBI and authorised dealers
- RBI directions on hedging of foreign exchange risk by residents and non-residents
- Liberalised Remittance Scheme
- Exchange-traded currency derivatives: SEBI and RBI regulation, and position limits
- Export and import regulations and realisation timelines
- Foreign investment routes: FDI, FPI and overseas direct investment
- GIFT City IFSC and the role of IFSCA
- Compliance, reporting, KYC and anti-money-laundering requirements

Module 9: Commodity Market Foundations

- Classification of commodities: energy, metals, bullion and agriculture
- Physical markets, supply chains and price discovery
- Spot markets, mandis and electronic spot platforms
- Standardisation, grading, quality and delivery specifications
- Warehousing, warehouse receipts and collateral management
- Producers, processors, consumers, traders and financial participants
- Global commodity exchanges: CME, ICE, LME and SHFE
- Indian commodity exchanges: MCX, NCDEX and the commodity segments of NSE and BSE
- Commodity price indices and benchmarks
- Seasonality, storage and transport in commodity markets

Module 10: Commodity Pricing and the Futures Curve

- Supply and demand fundamentals
- Inventory, storage costs and the cost-of-carry model
- Convenience yield
- Contango and backwardation
- Basis, basis risk, and the strengthening and weakening of basis
- Fair value of commodity futures under different compounding methods
- Roll yield and the term structure of futures prices
- Effects of the currency, interest rates and freight
- Import parity and export parity pricing
- Commodity cycles, super-cycles and price shocks

Module 11: Energy Markets

- Crude oil: grades, benchmarks and pricing (Brent, WTI and Dubai/Oman)
- OPEC+, shale production and global oil supply
- Refining margins and crack spreads
- Natural gas and LNG markets and pricing
- Electricity markets and power exchanges in India
- Coal and the energy transition
- Geopolitics and supply disruptions
- Energy price risk management for refiners, airlines and manufacturers
- Carbon pricing and emission allowances
- Energy futures and options on Indian and global exchanges

Module 12: Metals and Bullion

- Gold: supply, demand and its role as a monetary and investment asset
- Silver and platinum-group metals
- Bullion pricing: London benchmarks and Indian import parity
- Base metals: copper, aluminium, zinc, nickel and lead
- Central-bank gold reserves and purchases
- Gold investment products: ETFs, sovereign gold bonds, digital gold and electronic gold receipts
- India International Bullion Exchange at GIFT City
- Hallmarking, purity and the physical gold trade
- Import duties and their effect on domestic prices
- Hedging metal price risk for jewellers, manufacturers and fabricators

Module 13: Agricultural Commodities

- Major agricultural commodities: cereals, pulses, oilseeds, spices, cotton and sugar
- Crop cycles, monsoon and weather risk
- Minimum support prices and government procurement
- Trade policy: export restrictions, import duties and stock limits
- Agricultural supply chains and farmer producer organisations
- Agricultural futures, options and suspensions in India
- Price volatility and food inflation
- Agricultural price risk management for farmers, processors and traders
- Warehouse-receipt financing
- Global agricultural markets and benchmarks

Module 14: Commodity Derivatives, Hedging and Trading Strategies

- Commodity futures: contract specifications, tick values and profit or loss per contract
- Options on commodity futures and options on goods
- Long hedges and short hedges
- Calculating the minimum-variance hedge ratio and number of contracts
- Cross-hedging and basis risk
- Calendar spreads, inter-commodity spreads and processing spreads
- Cash-and-carry and reverse cash-and-carry arbitrage
- Commodity swaps and OTC hedging for corporates
- Clearing, settlement and delivery: compulsory delivery and both-options delivery
- Margins, position limits and risk containment measures

Module 15: Commodities and Currencies in Investment Portfolios

- Commodities as an asset class: return drivers and diversification
- Sources of return: spot return, roll yield and collateral return
- Commodity indices and index-based investing
- Commodity ETFs, mutual funds and AIFs in India
- Gold in strategic asset allocation
- Currency exposure in international portfolios: hedged and unhedged returns
- Currency overlay and the hedging of overseas investments
- Inflation hedging with real assets
- Performance measurement and risk-adjusted returns
- Suitability and risk disclosure for individual and family-office investors

Module 16: Trading Infrastructure, Regulation, Taxation and Emerging Trends

- SEBI's regulation of commodity derivatives and the convergence of markets
- Exchange membership, trading systems and order types
- Surveillance, market abuse and manipulation cases
- Accounting for derivatives and hedge accounting under Ind AS 109
- Taxation of currency and commodity derivatives: business income and speculative income
- Commodity transaction tax, stamp duty and GST
- Algorithmic trading and electronic execution
- Rupee internationalisation and local-currency settlement of trade
- Central bank digital currencies and cross-border payments
- ESG, climate risk and the energy transition in commodity markets