

Capital Markets Boot Campsm

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An undergraduate degree or MBA in finance doesn't prepare you for the realities of today's markets and their underlying structure. Whether you are new to the field or have been focused on the specifics of your job, this course will update and broaden your understanding of the US capital markets and the current trends and issues affecting it. It starts with a discussion of modern portfolio theory and behavioral finance and follows with a description of market structures and trading.

In the equity markets, regulatory changes and technology have dramatically changed our markets and trading practices. We now have 12+ markets, almost 40% of equity trading is done off exchange. We explain algo and HFT trading, dark markets and the search for liquidity and execution quality in a world of fragmented markets.

Other asset classes covered include fixed income, US Treasury, corporates and muni's, the yield curve and measures of duration and convexity. Finally we make clear the basics trading foreign currency, options and futures.

1. The Financial Services Industry
 - a. Functions of banking, securities, insurance, markets
 - b. Differences between retail and institutional, buy side and sell side
 - c. Mutual funds, hedge funds, ETF's
 - d. Equities, raising capital, The IPO process and Google's Dutch auction
 - e. Research a firm using SEC filings
2. Modern Portfolio Theory and Behavioral Finance
 - a. Risk vs. reward in creating portfolios
 - b. The Capital Asset Price Model (CAPM)
 - c. The Efficient Markets Hypothesis (EMH)
 - d. Behavioral Finance - Prospect Theory
3. Markets and Trading
 - a. Functions of markets – price discovery
 - b. Market structures: quote driven, order driven, dealer, electronic matching
 - c. Continuous and call markets
 - d. Roles in placing an order from buy side to sell side to market
 - e. Quoting -- bids and offers and sizes
 - f. Order types, market, limit, reserve, etc. and how they're used
 - g. Market Data, the SIP, CQS CTS
 - h. Market Indices, the Dow, S&P and Russell, etc.
 - i. Structure – capitalization, price and fundamental weighting
4. Order and Execution Management Systems (OMS/EMS) and FIX
 - a. Systems that manage order flow for the buy and sell side
 - b. Portfolio, order and execution management systems
 - c. Connection of buy and sell sides using the FIX protocol

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5. US Equity Markets Background
 - a. NYSE, seats, posts and booths
 - b. Functions of the specialist system
 - c. Reg NMS and the need for fast systems
 - d. NASDAQ and its creation
 - e. Competitive Market Makers (dealers) and how they made markets
 - f. The original Instinet Market
 - g. Decade of the Regs and Their Results
 - i. Manning, odd eighths, order handling, Reg ATS, decimalization, Reg NMS
 - h. New markets take over - ECNs, BATS and Direct Edge
 - i. Order books and electronic matching
 - i. Maker - taker model
6. The New NYSE
 - a. The NYSE Group
 - b. Merger with Arca Exchange
 - c. Trading licenses replace seats and specialists with DMMs and SLPs replace
 - d. New trading process, the new floor
 - e. Mergers with Euronext, Liffe, Amex offer options and futures trading
 - f. NYSE after the ICE merger
7. The New NASDAQ
 - a. NASDAQ's background
 - b. Open / close and time/price priority issues
 - c. Impact of ECNs
 - d. The Trade Reporting Facility (TRF)
 - e. How did the NASDAQ become a true "exchange" by becoming all electronic
 - f. Nasdaq acquires the Boston and Philadelphia exchanges and the OMX in Europe
8. Small and Micro-cap Unlisted Markets
 - a. Pink Sheets and Bulletin Board markets
9. Institutional Trading
 - a. The institutional search for liquidity
 - b. Transaction Cost Accounting (TCA), pre and post trade analytics
 - c. Benchmarks, VWAP, implementation shortfall etc. and post trade analytics
10. Algorithmic Trading
 - a. Direct Market Access (DMA) and Smart Order Routers (SOR)
 - b. Algos: TWAP, VWAP, Volume Participation, Implementation Shortfall, etc.
 - c. Intermarket Seep orders (ISOs)
 - d. The new automated trading Process
11. Alternative Trading Systems (ATSs) and Dark Liquidity
 - a. Sources of dark liquidity
 - b. Dark pools and Alternative Trading Systems
 - i. POSIT, Liquidnet, BIDS, LEVEL, etc.
 - c. Dark liquidity, dark pools, internalized markets, etc.

12. Low Latency Strategies
 - a. Automated market making
 - b. Stat arb, pairs trading and other quantitative trading methods
 - c. The Flash Crash -- Its causes and the regulatory responses
 - d. Quant Trading – passive and active
 - i. Statistical arbitrage, pairs trades, etc.
13. High Frequency Trading (HFT)
 - a. HFT'ers, their trading volumes and profits
 - b. Required market infrastructure
 - i. Co-location, FPGAs, cut through switches, etc.
 - c. Definitions of HFT by the CFTC, EU, Germany and the SEC
 - d. Flash Boys and IEX
14. After the Trade
 - a. Clearance and settlement
 - b. CUSIPS and LEIs
 - c. T+1 and T+3 processes
 - d. Functions of a prime broker, and custodian
15. Introduction to Fixed Income
 - a. Fixed income instruments --Treasuries, corporates, munis, money markets
 - b. Yield and return
 - c. Duration and convexity
 - d. Trading models, dealers and electronic markets
16. The 2008 Crisis – CDSs and CDOs
 - a. Credit Default SWAPS (CDSs)
 - b. Functions, trading, valuation
 - c. Delphi short squeeze and ISDA settlement
 - d. Collateralized Debt Obligations (CDOs)
 - e. Creation and tranching of asset backed securities
 - f. Valuation issues and models
 - g. What went wrong?
17. Foreign Exchange and Forwards
 - a. Foreign exchange trading, clearance and settlement
 - b. FX rates - purchasing power parity
 - c. Cross rates calculations
 - d. FX forwards and their calculation
 - e. New electronic markets
18. Futures
 - a. Futures, trading, valuation and settlement
 - b. What is in the futures contract
 - c. Difference between forwards and futures
19. Options
 - a. Options, trading and settlement
 - b. Valuation - Black Scholes model
 - c. The Greeks
 - d. How futures and options differ

- **Wrap up, summary and sources of further information.**

Additional available modules:

- Retail Payment Systems
 - a. Checks, ATMs, Credit and Debit Cards, RFID, NFC
 - Processing, clearing and settlement
 - b. New Models, PayPal, Zelle, RTPS, NFC, EMV, Apple Pay, etc.
- Institutional Money Transfer, Fedwire, CHIPS, SWIFT
 - a. Clearance vs. settlement processes
 - b. Use of institutional payment systems
 - c. Fedwire, CHIPS, SWIFT, Automated Clearing House (ACH)
 - d. Continuous linked settlement (CLS for forex)