NATIONAL UNIVERSITY OF SINGAPORE
NUS Business School
Department of Finance

FIN3702B INVESTMENT ANALYSIS & PORTFOLIO MANAGEMENT

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Course Objective

This is an introductory course in investments. It provides a comprehensive coverage of basic concepts, theories, applications and decision-making rules in financial investment.

Topics to be covered include fundamental security analysis on stocks, bonds, options and futures as well as modern portfolio management.

On completion, candidates should be conversant in investment management in preparation for careers in financial analysis and financial planning, investment banking, and corporate finance. Candidates should also be equipped to write the Chartered Financial Analysts (CFA) Level I examinations in quantitative analysis, equity securities analysis and portfolio management.

Basic Textbook

RBL: Reilly, Frank K., Brown, Keith C. and Leeds, Sanford J., Investment Analysis and Portfolio Management, Eleventh Edition, 2019, Cengage Learning, Inc.

Supplementary Readings

Students are expected to read financial news in *The Business Times, The Wall Street Journal, Financial Times,* and business periodicals like *The Economist, Fortune, Forbes*. Continual assessment will also be based on the student's understanding and analysis of market issues.

Prerequisite

Only students who have completed FIN2704 can enrol. A strong foundation in Statistics and Finance is required to do well in this course. Students should already be familiar with the following topics:

1. Risk, Portfolio Theory & CAPM   RBL#6, 7
2. Discounted Cash Flow & Ratio Analysis   RBL#8

Course Content

1. Introduction to investments
   a. The process of portfolio management
   b. Profiling the investor
2. Investment in stocks
   a. Fundamental analysis
      i. Stock market analysis
      ii. Industry analysis
      iii. Company analysis and stock selection
   b. Technical analysis
      i. Assumptions of technical analysis
      ii. Advantages of and challenges to technical analysis
      iii. Technical rules and indicators
   c. Efficient market hypotheses
      i. Forms of market efficiency
      ii. Tests of market efficiency
      iii. Implications of efficient capital markets
   d. Challenges from behavioural finance
3. Investment in bonds
   a. Bond fundamentals
      i. Bond features and characteristics
      ii. Bond yields
   b. Bond analysis and valuation
      i. Determinants of interest rates
      ii. Term structure theories
   c. Bond volatility measures
      i. What determines bond price volatility?
      ii. Duration measures
      iii. Determinants of convexity
   d. Bond portfolio management strategies
      i. Passive portfolio strategies
      ii. Active portfolio strategies
      iii. Matched-funding techniques
      iv. Contingent procedures
4. Investment in options and futures
   a. Payoff diagrams of forwards, futures and options
   b. Hedging with forwards, futures and options
   c. Pricing of options
5. Asset allocation
   a. Active versus passive asset allocation
   b. Mutual funds, hedge funds and alternative investments
   c. Environmental, Social and Governance considerations of an investment
6. Performance evaluation
   a. What is required of a fund manager?
   b. Composite portfolio performance measures
   c. Style analysis
7. Ethical and professional conduct
   a. CFA Code Of Ethics And Standards Of Professional Conduct
   b. Illustrations from CFA Standards Of Practice Handbook

Assessment Components

1. Quiz I MCQs   15%   )
2. Quiz II short-answer questions   30%   ) 50% individual credit
3. Quiz III CFA Ethics MCQs   5%   )
4. Group written report of stock valuation project   25%   ]
5. Group presentation of research paper   20%   ] 50% group credit
6. Group review of presentation of research paper   5%   ]

Assessment Approach

Students will be tested on their understanding of the prescribed body of knowledge as well as their analytical skills. The prescribed textbooks and readings are basic requirements for the body of knowledge for this course. Students who have a good understanding of the prescribed readings should be able to pass the course. Students who aspire for an A grade would need to be able to interpret financial reports, analyse issues and offer a view of the market.

Quizzes (50%)

Quiz I (15%) will be held in class in week 7. Quiz II (30%) will be held in class in week 13. Details of Quizzes I and II will be announced later.

Quiz III (5%) is on CFA Ethics and will be conducted online across all FIN3702A/B classes by Associate Professor Lee Hon Sing.

Group Assignments (50%)

Students are to organize themselves into 6 groups and appoint a group coordinator who will communicate with the instructor on behalf of the group.

There are 2 group assignments:

1. Written report of stock valuation project (25%)
    The goal in this component is to practise fundamental analysis in valuing a small-cap stock in SGX/Catalist. Each group must submit a stock proposal to the instructor for approval by week 4. The final report shall be about 20 double-spaced pages, including cover page and appendices. Plagiarism will result in zero marks. Turnitin score should be ≤5%. The final report is due by the Friday of week 8.

2. Discussion of research paper – class participation (20% + 5%)
    This component will be evaluated on the amount of team learning and class interaction, besides clarity of presentation and the ability to motivate the class to learn together with the team. Therefore, having one student dominating the entire delivery is not encouraged. Splitting the research paper into segments and having each student focusing only on one segment is not an indication of team learning as well.   There is generally more team learning when the class participates in interactive learning. This is the reward for class participation at the group level.

The research papers are:
<<To be announced>>

Academic Honesty & Plagiarism

Academic integrity and honesty is essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources.

Plagiarism is 'the practice of taking someone else's work or ideas and passing them off as one's own' (The New Oxford Dictionary of English). The University and School will not condone plagiarism. Students should adopt this rule - You have the obligation to make clear to the assessor which is your own work, and which is the work of others. Otherwise, your assessor is entitled to assume that everything being presented for assessment is being presented as entirely your own work. This is a minimum standard. In case of any doubts, you should consult your instructor.

Additional guidance is available at:
http://www.nus.edu.sg/registrar/adminpolicy/acceptance.html#NUSCodeofStudentConduct

Online Module on Plagiarism:
http://emodule.nus.edu.sg/ac/

Course Schedule

Subject	Description	Reference	Group Activity
WEEK 1 [August 10]			
Introduction Fundamental Analysis	Portfolio Management Process Fundamental Analysis • Stock Market Analysis • Industry Analysis	RBL#2 RBL#9	Form groups of ≤4 members; email names to instructor
WEEK 2 [August 17]			
Fundamental Analysis	Fundamental Analysis (cont'd) • Company Analysis • Stock Valuation	RBL#9, 8	
WEEK 3 [August 24]			
Technical Analysis Efficient Market Hypotheses	Technical Analysis • Assumptions • Advantages and Challenges • Technical Rules and Indicators Efficient Market Hypotheses • Forms of Market Efficiency • Tests of Market Efficiency • Implications of Efficient Capital Markets	RBL#5 RBL#5	
WEEK 4 [August 31]			
Behavioural Finance Stock Proposal Due	Behavioural Finance • Forms of Biases • Criticisms of Behavioural Finance	RBL#5	All groups email proposed company names and listing dates to instructor
WEEK 5 [September 7]			
Research Paper 1 Equity Portfolio Management Strategies Tutorial 1	Equity Portfolio Management • Passive Strategies • Active Strategies • Style Investing	Research Paper 1. Technical Analysis RBL#11	Group 1 presents (20%) Group 5 reviews (5%) Tutorial 1 All groups submit to Canvas by 2359hrs
WEEK 6 [September 14]			
Research Paper 2 Bond Valuation & Term Structure of Interest Rates Tutorial 2	Bond Fundamentals • Bond Yields • Bond Valuations • Determinants of Interest Rates • Term Structure Theories	Research Paper 2. Behavioural Finance RBL#12	Group 2 presents (20%) Group 6 reviews (5%) Tutorial 2 All groups submit to Canvas by 2359hrs
RECESS			
WEEK 7 [September 28]			
Quiz I (15%) Bond Volatility Measures	Bond Volatility • What Determines Bond Price Volatility? • Duration measures • Convexity measures	RBL#13	All students attend class • Paper & pen test • 1 hr

Subject	Description	Reference	Group Activity
WEEK 8 [October 5]			
Research Paper 3		Research Paper 3. Active vs Passive	Group 3 presents (20%) Group 1 reviews (5%)
Bond Portfolio Management	Bond Portfolio Management • Passive Portfolio Strategies • Active Portfolio Strategies • Contingent Procedures	RBL#13	
Tutorial 3			Tutorial 3 All groups submit to Canvas by 2359hrs
Valuation Report (25%) Due			All groups submit to Canvas by 2359hrs • 20 pages, double-spaced • MS Word, no encryption • Plagiarism zero marks
WEEK 9 [October 12]			
Research Paper 4		Research Papers 4. Endowment Model	Group 4 presents (20%) Group 2 reviews (5%)
Evaluation of Portfolio Performance	Portfolio Performance • Composite Performance Measures	RBL#18	
WEEK 10 [October 19]			
Research Paper 5		Research Paper 5. Crypto	Group 5 presents (20%) Group 3 reviews (5%)
Forward & Futures	Hedging with Forwards and Futures	RBL#14, 15	
Tutorial 4			Tutorial 4 All groups submit to Canvas by 2359hrs
WEEK 11 [October 26]			
Research Paper 6		Research Paper 6. ESG	Group 6 presents (20%) Group 4 reviews (5%)
Options	Option Payoff Diagrams Option Pricing • Black-Scholes Valuation Model	RBL#16	
Tutorial 5			Tutorial 5 All groups submit to Canvas by 2359hrs
WEEK 12 [November 2]			
Option Pricing	Option Pricing (cont'd) • Binomial Option Pricing Model	RBL#16	
Review	Stocks, Bonds, Derivatives, Performance		
Tutorial 6			Tutorial 6 All groups submit to Canvas by 2359hrs
Tutorial 7			Tutorial 7 Solutions to be discussed in class
WEEK 13 [November 9]			
Quiz II (30%)			All students attend class • Paper & pen test • 2 hrs
WEEK 14 [November 18]			
Quiz III (5%)			CFA Ethics • Online by A/P Lee Hon Sing • Complete by 2359hrs