

NATIONAL UNIVERSITY OF SINGAPORE
NUS Business School
Department of Finance

FIN3102C/FIN3702C INVESTMENT ANALYSIS & PORTFOLIO MANAGEMENT

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BIZ2-02-14

Session: Semester 1, 2020/2021

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 Textbooks

Students need only obtain either of the following (there is no necessity in having both):

1. **BKM:** Bodie, Zvi, Kane, Alex and Marcus, Alan J., *Investments*, Twelfth Edition, 2021, McGraw-Hill Education; or
2. **RBL:** Reilly, Frank K., Brown, Keith C. and Leeds, Sanford J., *Investment Analysis and Portfolio Management*, Eleventh Edition, 2019, Cengage Learning, Inc.

Previous editions of the textbooks are also suitable as long as they are published within the past five years.

Supplementary Readings

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

Prerequisite

Only students who have completed FIN2004 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 **BKM#5, 6, 7, 8, 9** or **RBL#6, 7**

Preclusion

BH3102 or BZ3302 or BK3101 or FNA3102 or FNA3102A/B or FIN3102 or FIN3102A/B
or FE5108 or EC3333 or CF3101/QF3101

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	30%) 50% individual credit
2. Term paper	20%)
3. Group in-class presentation of research paper	20%] 50% group credit
4. Group written report of stock valuation project	30%]

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.

Quiz (30%)

Details about format and coverage will be provided at a later time. **The quiz will be held in class on week 12.**

Term Paper (20%)

Each student is required to write a term paper. This paper shall be about 1000 words in length. There is penalty for anything in excess of 1100 words.

Students are to state, explore and defend a position in a contemporary investments-related debate. Examples of such debates are: (a) relevance of behavioural finance; (b) protection of individual investors; (c) regulation of investment in crypto currency; (d) suitability of active vs. passive investment strategies; (e) validity of technical analysis; (f) soundness of efficient market hypotheses. Students can learn more about such debates from financial newspapers and research papers.

Students earn credit by writing clearly and concisely about their opinions of their chosen topics. Good command of the language is as critical as the substance of their arguments. Plagiarism will result in zero marks. **The term paper is due by week 14.**

Group Assignments (50%)

Students are to organize themselves into groups of about 5 members each and appoint a group coordinator who will communicate with the instructor on behalf of the group.

There are 2 group assignments:

1. In-class presentation of research paper (20%)

Details of research papers will be provided at a later time. This component will be evaluated on the amount of team learning, 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 rest of the class participates in interactive learning.

2. Written report of stock valuation project (30%)

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 25 double-spaced pages, including cover page and appendices. **The final report is due by week 8.**

Schedule (Tentative)

COURSE SCHEDULE			
Subject	Description	Reference	Group Activity
WEEK 1 [August 12]			
Asset Allocation	Asset Allocation <ul style="list-style-type: none"> Investor Life Cycle Portfolio Management Process 	BKM#28 or RBL#2	Form groups of 5 and submit names to instructor
Fundamental Analysis	Fundamental Analysis <ul style="list-style-type: none"> Stock Market Analysis Industry Analysis 	BKM#17 or RBL#9	
WEEK 2 [August 19]			
Fundamental Analysis	Fundamental Analysis <ul style="list-style-type: none"> Company Analysis and Stock Selection 	BKM#18 or RBL#8	
Technical Analysis	Technical Analysis <ul style="list-style-type: none"> Assumptions of Technical Analysis Advantages of and Challenges to Technical Analysis Technical Rules and Indicators 	BKM#12 or RBL#5	
WEEK 3 [August 26]			
Efficient Market Hypotheses	Efficient Market Hypotheses <ul style="list-style-type: none"> Forms of Market Efficiency Tests of Market Efficiency Implications of Efficient Capital Markets 	BKM#11 or RBL#5	Tutorial 1 TBA Tutorial 2 TBA
Behavioural Finance	Behavioural Finance <ul style="list-style-type: none"> Forms of Biases Criticisms of Behavioural Finance 	BKM#12 or RBL#5	
Tutorials 1 & 2			

COURSE SCHEDULE			
Subject	Description	Reference	Group Activity
WEEK 4 [September 2]			
Ethics and Standards	CFA Code of Ethics and Standards of Professional Conduct	CFA Handbook BKM p86 or RBL #17.5	
Equity Portfolio Management Strategies	Equity Portfolio Management <ul style="list-style-type: none"> • Passive Strategies • Active Strategies • Style Investing 	BKM #11, 27 or RBL #11	
Research Paper 1		Research Papers 1. Efficient Market Hypotheses	Group 4 presents Research Paper 1
Stock Proposal Due			
<ul style="list-style-type: none"> • Email to instructor • Name of small-cap company and year listed 			
WEEK 5 [September 9]			
Bond Valuation Term Structure of Interest Rates	Bond Fundamentals <ul style="list-style-type: none"> • Bond Yields • Bond Valuations • Determinants of Interest Rates • Term Structure Theories 	BKM #14, 15 or RBL #12	
Research Papers 2 & 3		Research Paper 2. Behavioural Finance 3. Technical Analysis	Group 3 presents Research Paper 2 Group 2 presents Research Paper 3
WEEK 6 [September 16]			
Bond Volatility Measures	Bond Volatility <ul style="list-style-type: none"> • What Determines Bond Price Volatility? • Duration measures • Convexity measures 	BKM #16 or RBL #13	
Tutorial 3			Tutorial 3 TBA
RECESS			
WEEK 7 [September 30]			
Bond Portfolio Management	Bond Portfolio Management <ul style="list-style-type: none"> • Passive Portfolio Strategies • Active Portfolio Strategies • Contingent Procedures 	BKM #16 or RBL #13	
Research Paper 4		Research Paper 4. Active vs Passive	Group 1 presents Research Paper 4

COURSE SCHEDULE			
Subject	Description	Reference	Group Activity
WEEK 8 [October 7]			
Forward, Futures & Options Tutorial 4 Valuation Report Due <ul style="list-style-type: none"> • 25 pages, double-spaced • MS Word file, no password • Plagiarism zero marks 	Hedging with Forwards and Futures Option Fundamentals	BKM#22 or RBL#14, 15 BKM#20, 21 or RBL#16	Tutorial 4 TBA
WEEK 9 [October 14]			
Options Research Papers 5 & 6	Option Payoff Diagrams Option Pricing <ul style="list-style-type: none"> • Black-Scholes Valuation Model 	BKM#20, 21 or RBL#16 Research Papers 5. Alternative Investments 6. Hedge Funds	Group 7 presents Research Paper 5 Group 6 presents Research Paper 6
WEEK 10 [October 21]			
Option Pricing Research Paper 7 Tutorial 5	Option Pricing <ul style="list-style-type: none"> • Binomial Option Pricing Model 	BKM#20, 21 or RBL#16 Research Paper 7. Crypto Currency	Group 5 presents Research Paper 7 Tutorial 5 TBA
WEEK 11 [October 28]			
Evaluation of Portfolio Performance Research Paper 8 Tutorial 6	Portfolio Performance <ul style="list-style-type: none"> • What is required of a Fund Manager? • Composite Portfolio Performance Measures 	BKM#24 or RBL#18 Research Paper 8. Environmental, Social and Governance	Group 10 presents Research Paper 8 Tutorial 6 TBA

COURSE SCHEDULE			
Subject	Description	Reference	Group Activity
WEEK 12 [November 4]			
Tutorial 7 Research Paper 9 Quiz <ul style="list-style-type: none"> • open-book • 1.5 hrs in-class • details TBA 		Research Paper 9. Style Analysis	Tutorial 7 TBA Group 9 presents Research Paper 9
WEEK 13 [November 11]			
Research Paper 10 Investment Policy Statement	Wrapping Up: <ul style="list-style-type: none"> • What is an IPS? • Life-Cycle Investing 	Research Paper 10. Warren Buffet BKM#28.4 or RBL#2.3-2.5	Group 8 presents Research Paper 10
READING WEEK 14 [November 18]			
Term Paper Due <ul style="list-style-type: none"> • 1000 words • MS Word file, no password • Plagiarism zero marks 			