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Course Package “Investment analysis and portfolio management”

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1. General information about the course

Title of the course (as specified in the reformed curriculum)	Investment analysis and portfolio management
Name of the teacher	Edgar Aghabekyan
Novelty of the course (please select as appropriate)	This course is an updated and revised version of a course which already existed in the curriculum
Year of the course in the curriculum	1 st
Semester of the course in the curriculum	2 st
Language of instruction of the course	Armenian
Number of ECTS credits	5

2. Learning outcomes of the course

Upon completion of this course, the students shall be able to:

- research the investment environment, different types of financial investment instruments and financial institutions;
- analyse and evaluate the investment purposes, the efficiency of key stages of the investment process;
- calculate the risk and expected return of various financial instruments and investment portfolios;
- implement in practice the quantitative methods of investment decision making;
- apply the principles of portfolio theory in the process of investment portfolio management;
- analyse and evaluate the fair value of stocks and bonds, explain the main factors affecting the values;
- use financial derivatives in the investment management process
- distinguish between active and passive investment strategies; apply those strategies in practice;
- assess the efficiency of portfolio management;
- use Excel's software skills during investment analysis and portfolio management calculations and researches.

3. Syllabus of the course

Week	Topic	
1-2	Investors and investment process	<ul style="list-style-type: none"> • The Investment environment • Asset Classes and financial Instruments • Trading process and strategies • Individual and institutional investors • Investment management process • The Efficient Market Hypothesis • Behavioural Finance and Technical Analysis
3-6	Portfolio theory and practice	<ul style="list-style-type: none"> • Quantitative methods of investment analysis • Capital Allocation to Risky Assets • Optimal Risky Portfolios • Index Models • The Capital Asset Pricing Model • Arbitrage Pricing Theory and Multifactor Models of Risk and Return
7-8	Analysis and Management of Bonds	<ul style="list-style-type: none"> • Bond Prices and Yields • The Term Structure of Interest Rates • Bond Portfolio Management Strategies
9-10	Analysis and Management of Common Stocks	<ul style="list-style-type: none"> • Macroeconomic and Industry Analysis • Financial Statement Analysis • Equity Valuation Models
11-12	Using Financial Derivatives in Portfolio Management	<ul style="list-style-type: none"> • An Introduction to Derivative Markets and Securities • Forward and Futures Contracts • Option Contracts • Swap Contracts, Convertible Securities, and Other Embedded Derivatives
13-14	Portfolio Performance Evaluation	<ul style="list-style-type: none"> • Monitoring and revision of the portfolio • Portfolio performance measures

4. Teaching methodology of the course

The main methods and teaching approaches include.

- **Lectures**

Several topics will be covered through the lectures. The detailed outline of the topics covered is presented in the course schedule.

- **Self-study**

Students should study the given lecture material, the slides, the references and the recommended literature. The students need to have specific English or Russian skills to study this course, since all the study materials are only available in English or in Russian translation. This will allow the student to master the lecture material in greater depth and fulfill the assigned tasks.

- **Written homework and practice assignments execution**

Practice sessions covering homework exercises from books, essays writing and presentations, individual and group simulation games and assignments. The MS Excel is necessary for written homework and practice assignments.

- **Discussions**

During the course situational discussions are organized, which helps not only to perceive the theoretical material, but also to gain practical skills.

- **Tutorial consultations**

The lecturer should actively participate in the discussions, give advice to students during practical lessons, individual and group assignments.

The course teaching methods are based on active using of case studies and participant centered learning. During the course study and tasks, various applications and databases are used; students are encouraged to use different scientific and practical researches. The lectures will focus on the major points introduced in the syllabus. The classes will provide general background information on the topics, yet, prior each class the students are expected to read the relevant materials, PowerPoint slides, and assigned readings to be able to complete the homework, projects, and case assignments. Students are encouraged to ask questions and actively participate in class discussions. Students are expected to attend the classes regularly and to be on time.

5. Labour market relevance of the course

The main topics of the course, the assignments given, and the methodology of the course are based on the analysis of employer requirements. As a result, from the viewpoint of labour market relevance, one can emphasize:

- Ability to work in an international context
- Capacity for applying knowledge in practice
- Concern for quality
- Research skills
- Ability to work autonomously
- Capacity for analysis and synthesis
- Critical and self-critical abilities
- Decision-making
- Applying spreadsheet software (Excel)
- Performance Management
- Risk analysis and management
- Reconciling Financial Statements
- Understanding of Profit and Loss
- Financial analysis and reporting.

With the help of the course, the students will acquire financial analysis, risk assessment and asset management skills that are required by the employees in local and international markets.

6. Assessment and grading

Student learning will be evaluated on the basis of the following weighted components:

- 30% - Class participation, Homework
- 20% - Essay writing and presentation, Individual, Group Simulation Games and Presentation
- 50%- Final Examination

Class Participation

Simply attending the classes is not enough to grade. Student's activity during class discussions will be taken into account in evaluating the participation. Students can improve their participation grade considerably by coming to class prepared. A significant portion of the class participation grade is based on cases, assignments or topics discussions. It is expected that students or team members will work jointly in analyzing cases and preparing for class discussions, but every student in the class should be prepared to discuss each case. About a week before each case discussion, lecturer will present a few pertinent questions about the case. These questions are comprehensive summary of the issues that could arise during the case discussion.

Homework

Students will be asked to do several homework assignments. Assigned problems should demonstrate an understanding and thorough application of chapter objectives. At the end of the term lecturer will grade that assignments. Failure to turn in an assignment (even one which is not eventually graded) by the deadline will result in a zero grade.

Assignments

Assignments consist of essays, case studies and group simulation games. The essays refer to the topics and presented during the course. They must be no less than 15 pages and be presented by the student. The case studies and group simulation games can be individual and group-based. is the results discussed during the course and are finalized at the end of the course. In the end, the students must present their conclusions.

Final Examination

The final exam is cumulative, covering the material from the entire course. The exams will test students critical understanding and their ability to apply the material. The final examination is conducted in oral form. The examination format will be a combination of multiple-choice questions, short problems, long problems, and short essay-type questions. These questions will be designed to test students analytical and problem solving skills, and their knowledge of conceptual and qualitative material.

7. References

Main references and reading:

Primary Text:

1. Investment Analysis and Portfolio Management, Frank Reilly, Keith Brown, South-Western College Pub; 10th edition.
2. Investments, Zvi Bodie, Alex Kane, Alan J. Marcus, McGraw-Hill/Irwin; 10th edition.
3. Investments, by William Sharpe, Gordon J. Alexander, Jeffrey W Bailey, 6th Edition

Secondary Text:

4. Fundamentals of Investments (3rd Edition), by Gordon J. Alexander, William F.
5. The Theory and Practice of Investment Management: Asset Allocation, Valuation, Portfolio Construction, and Strategies Hardcover by Frank J. Fabozzi, Harry M. Markowitz Sharpe, Jeffery V. Bailey
6. Modern Portfolio Theory and Investment Analysis, 9th Edition 9th Edition, by Edwin J. Elton, Martin J. Gruber, Stephen J. Brown, William N. Goetzmann
7. Managing Investment Portfolios: A Dynamic Process 3rd Edition by John L. Maginn, Donald L. Tuttle, Dennis W. McLeavey, Jerald E. Pinto
8. <https://www.cba.am/am/SitePages/fmofinancialmarkets.aspx>
9. <http://nasdaqomx.am/am/9/trading/12/market-data>
10. <http://pages.stern.nyu.edu/~adamodar/>
11. <https://www.investing.com/>
12. <https://www.bloomberg.com/>
13. <https://www.teletrader.com/?culture=en-US>
14. <https://finviz.com/>
15. <https://www.rbc.ru/>

The readings from the books will be supplemented by other materials such as case studies, relevant news articles, and academic journal articles. To get the most out of the course, students should make an effort to be well-informed about current developments in the financial markets by reading news and publications.

8. Course assignments

8.1 Assignment 1

Individual assignment -The Individual Simulation Game

Students invest in Armenian financial instruments. Each starts with AMD 5 billion. The main goal is to ensure asset growth. During the assignment, the students present:

- Their detailed investment policy, including key portfolio restrictions. The policy is presented during the first week;
- Brief analysis of their preferred asset markets. Within this framework, a summary of up to 5 pages is available;
- The distribution of their assets based on asset risk, profitability and expectations. This is a 5-page summary report;
- During portfolio management, they submit a report on the effectiveness of the asset management. Reports are submitted every 2 weeks.

Each student will submit a presentation outlining the results of the simulation at the end of the course. The presentation should be designed as a report. The students will not be assessed based on relative performance of their funds. The quality and consistency of their decisions matters most. All students are required to have appearance on the simulation presentation.

Individual assignment – The Individual Simulation Game

Students form an index portfolio based on a stock index. In this regard, they present the principles for implementing the index passive strategy and periodically reassess the value of their assets, which is presented in the form of a summary report. At the end of the course, all students will submit a summary report and presentation for their passive strategy.

Individual assignment – project or case study

At the beginning of the course, students choose Armenian financial institutions, banks, insurance companies, investment companies, investment and pension funds. Three companies from each. Based on their financial statements, students carry out analysis of assets and portfolio structure. The analysis is presented in two sections.

- Analysis of Investment Legal Restrictions of Financial Institutions;
- Analysis of financial institutions with at least 5 years' assets and potential structure;

The analysis is presented during and before the completion of the course in the form of summary reports and presentations. The performance is accompanied by situational discussion.

8.2 Assignment 2

Group assignment –The Group Simulation Game

Class participants are expected to organize themselves into groups of up to 3 students. The groups will be formed at the first class. Each group will start a fund with initial capital of USD 10 million. The group will have to declare the type of fund you plan to manage (hedge, endowment, mutual, pension, etc...).

- Groups will submit their investment policy statement at the second class.
- The group will have to make decisions for asset allocation, leverage, and risk based on the group's investment policy statement.
- In this regard, each group presents a report on individual financial instruments and total portfolio risk for expected profitability. The report should be up to 5 pages.
- The groups also present a summary of their preferred financial instrument markets up to 5 pages.
- Every 2 weeks groups submit a report on the effectiveness of the asset management. The report includes: variance, standard deviation, sharpe ratio, Information ratio (including breadth and information coefficient), treynor ratio, M-squared ratio, sortino ratio, maximum drawdown, etc....

The group's overall goal is to maximize the net asset value of the fund within the limitations of the investment policy. Each group will submit a Group Simulation presentation outlining the results of the simulation at the end of the course. The presentation should be designed as a report to the fund board. The groups will not be assessed based on relative performance of their funds. The quality and consistency of their decisions matters most. All group members are required to have appearance on the group simulation presentation.

Annex: Presentation slides

Explanation: Please provide presentation slides for your course (this can be done in a separate document, e.g. Power Point (Minimum: 25 slides))