KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY
Graduate School of Green Growth

VALUATION OF GREEN FIRMS
(GG535)

Spring 2017 (2nd half-semester)

Instructor: Professor Kwangwoo Park (朴光愚), Ph. D.
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Text (Optional): 1 Corporate Finance, 10th (Asia Global) Edition, by Stephen A. Ross, Randolph W. Westerfield, Jeffrey Jaffe, Joseph Lim, Ruth Tan, and Helen Wong, McGraw-Hill Irwin, 2015 (RWJ). *9th Edition is OK.
2. Investments, 9th Edition*, Zvi Bodie, Alex Kane, & Alan Marcus, McGraw-Hill Irwin, 2012 (BKM) *8th Edition is OK.
3. Korean Text: Green Finance (녹색금융), 노희진(Hee Jin Noh), Bakyoungsa (박영사), 2010 (in Korean)

Course Goal: This course is designed to help you to understand the fundamental functions of green finance and valuation of green firms.

The learning objectives of this course are:
1. Students will produce professional business documents.
2. Students will demonstrate effective interpersonal communication in a team setting.
3. Students will use appropriate analytical tools to identify problems in green corporate finance and develop a solution in valuing green firms.

Course Introduction: We first overview issues of firm valuation including discounted cash flow (DCF) analysis, macro-economy and industry analysis, equity valuation, and financial statement analysis. We then extensively explore green valuation issues including valuation of green technologies, ESG (Environmental, Social and Governance) issues, and various green firm valuation models. Finally, issues continuously in the news and the subject of vigorous green finance policy debate will be discussed.

Class Work: The class will be primarily designed as a combination of lecture and case discussion where strong interactions among students are crucial in the success of instructions.

Grading: There are 100 total points in the class and they are distributed as follows:

Exam	40 points	**(May 2nd)**
Term Proposal	10 points	**(May 9th)**
Green Firm Analysis Presentation	10 points	(May 18th /23rd)
Green Firm Analysis Report	40 points	(Due May 30th)
Class/Seminar Participation	5 points	**(Extra Credits)**

Grade Distribution: **A(+,0,-): 40~60%, B(+,0,-):40~60%, C: 0~20%**

Exam: There will be 1 exam. The content of exam will be based on the materials covered in the class and problems in the textbook.

Green Firm Analysis Proposal/Report: Consider yourself as an able financial analyst and write a company analysis report using all you have learn throughout this class. A green firm should be chosen. It would be nice to perform a top-down approach by starting your analysis from macroeconomic analysis to green firm and/or green technology analysis. Digging deep will only make sense when your work will well-organized. The length of the report is no more than double-spaced 20 pages. We will discuss in class more about writing a better green firm analysis report at the beginning of the semester. **2-page proposal** is due on March 3rd and the final report is due on March 31st .

Case Presentation: You are also required to present the green firm analysis report using PowerPoint presentation slides. The materials should be prepared for a maximum 15 minute presentation (Around 10~15 slides). Often times, shorter presentation is more effective. Individual student will give presentation during the Week 8.

Class and Green Finance/Regular Finance Seminar Attendance and Participation: Class/Seminar attendance and participation is crucial for the success of a class with active case discussion. In order not to fail, students are required to have at least 80% attendance rate of class. Those who expect not to meet the attendance rate should provide me with documents with legitimate reasons prior to missing the class.

Academic Dishonesty: We follow all KAIST procedures on academic dishonesty. Students guilty of cheating in quizzes or showing plagiarism in writing case reports will receive an F in the course and whatever additional disciplinary action the University imposes.

Assignments: (TENTATIVE, *subject to change*)

Week 1 Introduction

Course Introduction
Overview of Green Finance
Reading: RWJ (Ch. 4) Discounted Cash Flow (DCF) Valuation

Week 2 Security Analysis

Reading: BKM (Ch. 21) Macroeconomic and Industry Analysis

Week 3 Valuation and Project Evaluation

Reading: BKM (Ch. 22) Equity Valuation Models
Reading: BKM (Ch. 23) F**inancial Statements Analysis**

Week 4

Valuation of Socially Responsible Firms
Social Enterprise and Social Impact Bonds (SIBs)
Instructor's Lecture Notes

Week 5

Exam 1 (May 2nd) No Class on May 4th (In Lieu of Class in the Final Week)

Week 6

Due date for the Green Firm Analysis Proposal (May 9th)
Valuation of Green Technologies: Valuing Intellectual Properties, Patent Licensing, Measuring Greenness.
Lecture Notes by Sungwon Ryu, CEO, Patent Lawyer, Jeeshim and IP.

Week 7

Valuation of Environmental Costs : Models by Trucost, Aviva, Innovest, and Sam's
Green Firm Performance: Carbon EBITDA Strategy
Corporate Valuation and ESG Rating Models
Key ESG Issues, SRI Index, and Climate Change Rating Model (Carbon Beta)
Lecture Notes by Youngjae Ryu, CEO, Sustinvest Research & Consultancy.

Week 8

Presentation of Analyzed Green Firms (At the May 18th/23rd time for 15 minutes with PowerPoint slides)
Due date for the Green Firm Analysis Term Report (Upload as a 'Word' file in the Lecture Forum by 5 PM, Thursday, May 30th)