

Enterprise Risk Management Program

ERMC PS5001: Introduction to Finance
Tuesdays, 6:10PM – 8:00PM
3 credits

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Instructor's Web:	www.ProfessorDrou.com
Office Hours:	5:00pm-6:00pm (Thursdays) Remote via Zoom by Appointment
Response Policy:	I intend to log onto the course and check email daily. You should expect a response from me within 24 hours. If you have an urgent question or concern, please contact me via text message or telephone
Teaching Assistants:	Tianyi (Tony) Meng tm3211@columbia.edu
Office Hours:	By Appointment

Course Overview

This course is designed to provide practitioners and those seeking careers in finance with a rigorous combination of theory and practice as we explore the fundamental principles of finance. Students currently employed in this dynamic and evolving field will have the opportunity to become familiar with many of the core principles and concepts commonly applied in their field daily. From a practical perspective, Introduction to Finance is meant to reinforce work-related practices, such as analyzing financial statements, the application of time value of money concepts, asset valuation on a discounted cash flow (DCF) basis, cost benefit analysis (CBA), and the quantification of the multifaceted relationship between risk and return in financial markets. The course will be divided into two sections: The first part of the course will focus investment analysis concepts and the second part of the course will focus on corporate finance concepts including understanding financial statements, build projections and corporate valuations.

Through this course, students wishing to enter diverse areas of finance, such as asset management, credit analysis, financial and investment analysis, portfolio management, and risk management, will have the opportunity to acquire and develop critical work-related skills. These include evaluating corporate performance based on a thorough analysis of financial statements, estimating the present and future values of a wide range of cash flows, and using these concepts as the basis for asset valuation, applying commonly used cost-benefit analysis methods to evaluate investment decisions, and estimating the risk and return of individual securities and diversified portfolios.

The topics covered in this course provide students with the necessary background and preparation to take more advanced courses in finance.

Learning Objectives (LO)

Upon successful completion of this course, you will be able to:

1. Apply the principal time value of money (TVM) concepts used in financial analysis and valuation.
2. Understand Risk & Return tradeoff and the mitigation of such risk through allocation and diversification
3. Compare the risk and returns to market and learn other measurements of calculating expected return
4. Understand how stocks and bonds trade in the secondary markets and how they are valued. Apply basic risk & return analysis based on expected cash flows (dividends or coupon payments)
5. Classify the core components of the three (3) principal financial statements: the balance sheet, the income statement, and the statement of cash flows.
6. Describe the applications and uses of common-size financial statement analysis.
7. Identify commonly used financial ratios to measure a firm's financial performance.
8. Determine the value of debt and equity securities using discounted cash flow methods (DCF) and alternative valuation techniques and use these for various transactional situations such as Mergers and Acquisition or Leveraged Buyout Outs

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Readings

Textbook (CD)

The following text is based on the professor's lecture notes and is highly recommended – with the textbook you can access Active Learning homework platform.

Droussiotis, C. (2020), *An Analytical Approach to Investments, Finance and Credit*, Preliminary Edition. Cognella Publishing. ISBN: 978-1-1935551-66-9 - Link to purchase including Active Learning: <https://store.cognella.com/95829>

Textbook (RWJ)

Ross, Westerfield, and Jordan. (2012) *Fundamentals of Corporate Finance*, 12th Edition. McGraw-Hill Irwin. ISBN 978-1-259-91895-7

Supplemental Readings

I will post supplementary articles, business cases, and Power Point Lecture Notes on Canvas and on my website www.ProfessorDrou.com on a regular basis.

Financial Calculators

Given the scope and nature of Introduction to Finance, students are strongly recommended to obtain a financial calculator, such as: HP-10BII or Texas Instruments (TI) BAIL.

Chapters 4 and 6 in your RWJ textbook include an appendix that shows how to use both financial calculators to perform present value and future value calculations and to solve for the rate of return.

Excel

In addition, students are encouraged to use Excel to perform the analytical calculations discussed in the course. Most of the lectures will include spreadsheet analysis.

Resources

Columbia University Library

Columbia's extensive library system ranks in the top five academic libraries in the nation, with many of its services and resources available online: <http://library.columbia.edu/>.

SPS Academic Resources

The Office of Student Affairs provides students with academic counseling and support services such as online tutoring and career coaching: <http://sps.columbia.edu/student-life-and-alumni-relations/academic-resources>

Columbia University Information Technology

[Columbia University Information Technology](http://columbia.uit.edu/) (CUIT) provides Columbia University students, faculty, and staff with central computing and communications services. Students, faculty, and staff may access University-provided discounted software downloads (<https://columbia.uit.edu/>).

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Course Requirements (Assignments)

Graded Homework Problems (20%):

Graded Homework Problems give you an opportunity to demonstrate your mastery of the topics covered in the course and solidify your knowledge of finance theory through the practical application of the concepts, models, and theories, discussed in class. Students are required to submit a set of Graded Homework Problems. Homework and due dates will be posted on Canvas. The student could wish to submit their homework via Cognella's ACTIVE LEARNING platform.

Individual Project (15%):

Each student will be assigned a publicly traded company. See Exhibit A for Project's description.

Attendance (5%):

Attendance (both in class and on-line) will be recorded.

Midterm Exams (I & II) (30%):

There will be two short Midterm Exams that will be based on the textbook and the spreadsheets. Midterm Exam I will be based chapters 1-4 (Time Value of Money, Risk, Return and Modern Portfolio Theory concepts) and Midterm Exam II will be based chapters 10 and 11 (Secondary market – stock and bonds)

Final Exam (30%):

The Final Exam will include some of the concepts from the midterm including equity valuation, Return and TVM. Most of the exam though will focus on textbook chapters 15-17 and partial chapter 9. The students need to study spreadsheets analysis covered in class including the Alexandria Hotel projections and DCF analysis, Hyatt stock valuation, LBO and Capital Markets financial model, and return and bond analytics spreadsheet. The exam will be taken during the Exam Period. It will be opened books taken on-line.

The students need to study the various spreadsheet analysis covered in class including the Celerity Technology Company case study; the Alexandria Hotel WACC analysis and Hyatt Corporation enterprise valuation methods.

Evaluation/Grading

The final grade will be calculated as described below:

FINAL GRADING SCALE

Grade	Percentage	ASSIGNMENT	% Weight
A+	98–100 %	Mid-term Exam	30%
A	93–97.9 %	Final Exam	30%
A-	90–92.9 %	Attendance and Participation	5%
B+	87–89.9 %	Graded Homework	20%
B	83–86.9 %	Individual Project	15%
B-	80–82.9 %		
C+	77–79.9 %		
C	73–76.9 %		
C-	70–72.9 %		
D	60–69.9 %		
F	59.9% and below		

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Course Policies

I expect you to come to class on time and thoroughly prepared. I look forward to an interesting, lively and confidential discussion. If you miss an experience in class, you miss an important learning moment, and the class misses your contribution.

Late work

There will be no credit granted to any written assignment that is not submitted on the due date noted in the course syllabus without advance notice and permission from the instructor.

School Policies

Copyright Policy

Please note—Due to copyright restrictions, online access to this material is limited to instructors and students currently registered for this course. Please be advised that by clicking the link to the electronic materials in this course, you have read and accept the following:

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials. Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship, or research." If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use," that user may be liable for copyright infringement.

Academic Integrity

Columbia University always expects its students to act with honesty and propriety and to respect the rights of others. It is fundamental University policy that academic dishonesty in any guise or personal conduct of any sort that disrupts the life of the University or denigrates or endangers members of the University community is unacceptable and will be dealt with severely. It is essential to the academic integrity and vitality of this community that individuals do their own work and properly acknowledge the circumstances, ideas, sources, and assistance upon which that work is based. Academic honesty in class assignments and exams is always expected of all students.

SPS holds each member of its community responsible for understanding and abiding by the SPS Academic Integrity and Community Standards posted at <http://sps.columbia.edu/student-life-and-alumni-relations/academic-integrity-and-community-standards>. You are required to read these standards within the first few days of class. Ignorance of the School's policy concerning academic dishonesty shall not be a defense in any disciplinary proceedings.

Accessibility

Columbia is committed to providing equal access to qualified students with documented disabilities. A student's disability status and reasonable accommodations are individually determined based upon disability documentation and related information gathered through the intake process. For more information regarding this service, please visit the University's Health Services website: <https://health.columbia.edu/services/ods/support>.

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Course Schedule/Course Calendar

Please check Canvas and website www.ProfessorDrou.com for schedule changes and updates:

LECTURE OUTLINE

Week	Date	S	LO	Textbook Chapters/Notes	Lecture	Assignments /Homework
1.	9/5	INVESTMENT ANALYSIS		Power Point Presentation	Going over Course Syllabus. Complete "Getting to Know You" forum. <u>LECTURE 1</u> Introductory Finance Concepts: <ul style="list-style-type: none"> • Risk, Return, Time & Allocation • Trading Securities (Stocks/Bonds) • Firm Specific (Financial Analysis and Valuation) • Transaction Analysis 	
			L1	Ch. 1	<u>LECTURE 2 – Time Value of Money</u> TVM Concepts: <ul style="list-style-type: none"> • One-time FV, PV, Interest, Time • Annuity FV, PV, Interest, Time • Uneven CF 	
2.	9/12		L2	Ch. 2&3	<u>LECTURE 3 – Risk, Return, Time, Alloc</u> Risk & Return Concepts: <ul style="list-style-type: none"> • HPR, IRR and Stand. Dev. • Historical & Scenario • Cov, Cor & Efficient Frontier 	<u>Hwk#1 Due:</u> Ch 1a and 1b
3.	9/19		L3	Ch. 3&4 (partial)	<u>LECTURE 4 – Comparative Analysis</u> Comparative Market Analysis Concepts: <ul style="list-style-type: none"> • Beta, CAPM, Sharpe Ratio 	<u>Hwk#2 Due:</u> Ch 2
4	9/26		L4	Ch. 10	<u>LECTURE 5 – Investing in Stocks</u> Secondary Market/Trading Stocks: <ul style="list-style-type: none"> • Stock Exchanges • Return & CF concepts (Div) • 	<u>Hwk#3 Due:</u> Ch 3&4
5	10/3			MIDTERM EXAM I – REVIEW		<u>Hwk#4 Due:</u> Ch 10
6	10/10			MIDTERM EXAM I (Chapters 1-4)		
7	10/17		L4	Ch. 11	<u>LECTURE 6 – Investing in Bonds</u> Secondary Market/Trading Bonds: <ul style="list-style-type: none"> • Bond Markets • Bond Analysis (CY, YTM, YTC) • Basic Bond Val (Duration & Convexity) 	

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Week	Date	S	LO	Textbook Chapters/Notes	Lecture	Assignments /Homework
					MIDTERM EXAM II – REVIEW	
7	10/24				MIDTERM EXAM II (Chapters 10-11)	<u>Hwk#5 Due:</u> Ch 11
9	10/31	CORPORATE	L5, 6	RWJ: Ch. 2 CD: Ch. 15	<u>LECTURE 7 – Financial Analysis</u> Financial Statement Analysis: <ul style="list-style-type: none"> • Balance Sheet, Income Statement • Building Cash Flow Statement Case study: Celerity Technology Company	
	11/7		NO CLASS			
10.	11/14		L7	RWJ: Ch. 3,4 CD: Ch. 15, 16	<u>LECTURE 7 (Cont.)– Financial Analysis</u> Financial Statement Analysis: <ul style="list-style-type: none"> • Ratio Analysis • Projections Case study: Celerity Technology Company	
11	11/21		L8	CD: Ch 17	<u>LECTURE 8 – Valuation Analysis</u> Introducing 6 methods of Valuation: <ul style="list-style-type: none"> • Method#1: Stock Price • Method #2: Intrinsic Value • Method #3: DDM • Method #4: Trading Comparable • Method #5: Acquis. Comparable • Method #6: DCF Case Study: Hyatt Corporation	
13.	11/28		L8	CD: Ch 9	<u>LECTURE 9 (Transaction Analysis</u> <ul style="list-style-type: none"> • Method #6 (Cont.): DCF Method • Case Study -LBO and M&A Case Study: Alexandria Hotel	
14.	12/5					
14.	12/12			CD: 15-17, 9 (partial)	<u>Project Review and Final Exam Review</u>	<u>Project Due</u> 12/22
15.	12/19			FINAL EXAM		

EXHIBIT A - FINAL PROJECT

Please submit the entire project including the write-up and excel analysis in a PDF format.

1. Company Profile

- Write a brief profile of the company you are assigned to including a description of their products or services and the markets they compete.
- Summary of their stock performance in the last quarter versus the market and closest competitors.

2. Financial Analysis

- The financial analysis should include, but not be limited to, the preparation of the latest 3-year financial statements (Income Statement, Balance Sheet and Cash Flow Statement) including the Last Twelve Months (LTM) – please note that LTM means that if you are using June 30, 2023 financials then use the income and cash flow statements for June 30 and Mar 31 2023, December 31 and September 30 2022. For the balance sheet use June 30, 2023.
- Provide an explanation of the results year-over-year including ratio and trend analysis

3. Projections & Valuations

- Projections and Valuation Analysis for your assigned public company using Excel. The valuation analysis should calculate the assigned companies Enterprise Value using the following 3 methods of valuation:
 - Method #1 (current stock price to calculate the EV)
 - Method #4 (based current trading peer comparable)
 - Method #6 (DCF Analysis)
- In addition to the analysis, you need to provide a page or two of discussions on your analysis including the assumptions you used for driving revenues and expenses.
- Discussions on the results on your various methods of valuation and recommend if someone should **buy, hold, or sell the stock**.

4. Technical Analysis

- Analyze the stock performance against the market (S&P 500) generating beta coefficient and other standard deviation results using Excel's regression analysis or calculated manually.

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ASSIGNED COMPANIES

#	COMPANY	SYMBOL	SECTOR	INDUSTRY
1	Albany International	AIN	Consumer Cyclical	Textile Manufacturer
2	American Axle & Manufacturing	AXL	Consumer Cyclical	Auto Parts Manufacturer
3	AZEK Corporation	AZEK	Industrials	Building Products
4	Boyd Gaming Corp.	BYD	Consumer Cyclical	Resorts & Casinos
5	Carnival Corporation	CCL	Consumer Cyclical	Cruise Operator
6	Celanese Corporation	CE	Basic Material	Chemicals
7	Century Casino	CNTY	Consumer Cyclical	Resorts & Casinos
8	Choice Hotels International	CHH	Consumer Cyclical	Lodging
9	Constellation Brands	STZ	Consumer Defensive	Wineries & Distilleries
10	Crimson Wine Group	CWGL	Consumer Defensive	Wineries & Distilleries
11	Darden Restaurants	DRI	Consumer Cyclical	Restaurants
12	Delta Airlines	DAL	Industrials	Airlines
13	Doximity	DOCS	Technology	Digital Technology
14	Flowserve Corporation	FLS	Industrials	Specialty Industrial Machinery
15	HCA Healthcare, Inc.	HCA	Healthcare	Medical Care Facilities
16	Hormel Foods Corporation	HRL	Consumer Defensive	Packaged Foods
17	International Paper	IP	Consumer Cyclical	Paper & Packaging
18	Kellogg Company	K	Consumer Defensive	Food
19	Laureate Education	LAUR	Consumer Defensive	Education & Training Services
20	Marcus Corporation	MCS	Consumer Cyclical	Lodging
21	Marriott International	MAR	Consumer Cyclical	Lodging
22	McDolands Corporation	MCD	Consumer Cyclical	Restaurants

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23	Nabors Industries	NBR	Energy	Oil & Gas Drilling
24	Royal Caribbean Cruises Ltd	RCL	Consumer Cyclical	Cruise Operator
25	Select Medical	SEM	Healthcare	Medical Care Facilities
26	Silgan Holdings	SLGN	Consumer Cyclical	Paper & Packaging
27	Starbucks Corporation	SBUX	Consumer Cyclical	Coffee shops
28	Steel Dynamics	STLD	Basic Material	Chemicals
29	TAL Education Group	TAL	Consumer Defensive	Education & Training Services
30	Texas Instrument	TXN	Technology	Semiconductors
31	Texas Roadhouse	TXRH	Consumer Cyclical	Restaurant
32	Tyson Foods	TSN	Consumer Defensive	Packaged Foods
33	U.S. Foods	USFD	Consumer Defensive	Food Distributor
34	United Airlines	UAL	Industrials	Airlines
35	Verso Corporation	VRS	Basic Material	Paper & Packaging
36	Wendy's Company	WEN	Consumer Cyclical	Restaurant
37	Wesco International	WCC	Industrials	Industrial Distribution
38	Wyndham Hotels & Resorts	WH	Consumer Cyclical	Lodging
39	Wynn Resorts	WYNN	Consumer Cyclical	Resorts & Casinos
40	Yum! Brands	YUM	Consumer Cyclical	Restaurants