THE OHIO STATE UNIVERSITY
FISHER COLLEGE OF BUSINESS

BUSINESS FINANCE 7221 – FINANCIAL MODELING

SPRING 2022

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Classroom: Gerlach 355
Office hours: By Appointment via Zoom

COURSE OBJECTIVES & OVERVIEW

Financial modeling will focus on leveraging primary finance skills and Excel to apply and build:

- Real Estate model
- Dividend discount model
- Simple discounted cash flow models
- Detailed discounted cash flow model

Additionally, the course will reinforce fundamental Excel and finance concepts as well as introduce Python and methods of forecasting.

We will accomplish these objectives through:

- Lecture
- Class exercise + discussion
- Financial modeling practice problems
- Three simple discounted cash flow models
- One detailed discounted cash flow model, thesis and presentation

CLASS MATERIALS

Required books

- Excel Modeling in Corporate Finance – Digital ($35), Physical ($48)
  - New book is strongly recommended to access accompanying Excel files
- Little Book of Valuation

Optional books

- Superforecasters
- Damodaran on Valuation
- The Dark Side of Valuation
- Financial Modeling
- Data Smart
- Excel Bible
- Narrative and Numbers

GRADING

Assessment	%	*Individual or group*
Homework	15	*Individual*
Python (Install + API key)	10	*Individual*
Excel quiz (Carmen)	10	*Individual*
Simple DCF	15	*Group*
Peer review of simple DCF	15	*Group*
Detailed Excel DCF	15	*Group*
Investment memo	10	*Group*
Final presentation	10	*Group*
Total	100	

Excel quiz - 10%
The Excel quiz will be a short SINGLE-attempt quiz in CARMEN to assess your ability to: 1) format (aesthetic, print, graph) and 2) apply the correct formula for the financial model (FV, PV, NPV, IRR, simple discounting, scenario/sensitivity/regression analysis).

Install Anaconda (Python IDE) and sign-up for FMP API key – 10%
Install Anaconda and sign-up for an API through FMP to work through the in-class quantitative finance example.

Homework - 15%
Homework will be graded. This class requires *doing*. You must practice and master the rudiments in order to understand and build useful financial models.

Homework should be submitted in CARMEN. Each electronic file should be appropriately name. I would suggest using a naming convention similar to this example:

CH1-4_your name

Excel tabs should be renamed to reflect the appropriate assignment from the text. Specifically, each tab should reference the assigned model number and text chapter (for example, “Ch. 1 model 1.1”).

Given the number of models assigned in the course, it is important that you complete all assignments **on time**.

Three simple DCF models - 15%
Build three simple DCF models of three consumer discretionary companies of your choosing by utilizing the most recent annual historical financial data and forecasting key assumptions – sales growth, operating margin, discount rate and terminal growth rate (template provided). Building three simple DCF models will serve two purposes: 1) it will assist in *scoping* the final detailed DCF project by quantitatively determining whether the company *merits* further research 2) it will provide additional practice to master the mechanics of discounted cash flow valuation.

Each group will submit one workbook containing the all three simple DCF models and briefly (10-20 min.) discuss the three simple DCF models and walk-through the rationale for the chosen assumptions.

Peer review of simple DCF – 10%
Each group will peer review another group's DCF models and provide comments (1 paragraph or 3-4 sentences per model/presentation. Evaluations will be based on: the idea being actionable and providing compelling supporting evidence for the assumptions. Points will be assigned on a scale of 1-10. I expect all comments to be respectful and constructive (use IDEO framework "I like…I wish…what if…").

Detailed discount cash flow (DCF) model – 15%
You will construct a detailed discounted cash flow model of a positive net income or free cash flow consumer discretionary company.

The detailed model must include:
1) Discounted cash flow calculation
2) Key drivers
3) Forecasted financial statements and
4) Forecasted financial ratios

Investment memo – 10%
The memo must include:
1) **Actionable** buy or sell recommendation
2) Quantitative assumptions that are clear and **well supported**
3) **A financial model** that is flexible and easy to follow

DCF presentation - 10%
Present a 5-10 minute pitch for your chosen consumer discretionary company. The presentation should walk through key assumptions, articulate the downside/upside, expand on the key misunderstanding and be well supported. Ideally, the presentation should motivate the audience (your peers) to action (buy or sell).

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GRADE SCALE

Letter Grade		%	GPE %	Letter Grade		%	GPE %
A	=	93 - 100	4.0	C+	=	77-79.99	2.3
A -	=	90 - 92.99	3.7	C	=	73-76.99	2.0
B+	=	87 - 89.99	3.3	C-	=	70-72.99	1.7
B	=	83 - 86.99	3.0	D+	=	67-69.99	1.3
B-	=	80 - 82.99	2.7	D	=	63-66.99	1.0

A: Exemplary Performance; A-: Strong Performance; B+: Good Performance; B: Adequate Performance; B-: Adequate Performance, with Some Deficiencies; C+: Weak Performance, with Serious Deficiencies; C: Poor Performance, with Pervasive Deficiencies Performance below the "C" level will be addressed on a case-by-case basis

EXPECTATIONS

- **Technology** – A laptop with Microsoft Excel and access to the internet is **required** for this course.
- **Late assignments** – The responsibility to submit assignments on time resides with you. As a policy, I will **not** accept late assignments. It isn't fair to make exceptions for some students and not others. Additionally, late or missed assignments will make class time less valuable and result in a slower grading process for all. That being said, if you experience a medical or family emergency *and* provide documented support I will work with you.
- **Homework file name** – Please include in the file name: 1) **the chapter number(s)** and 2) your name in the file name. Inside the workbook label the tabs with the chapter number and the question number (i.e. Chapter 1 question 1 = 1.1)

FISHER HONOR CODE

As a member of the Fisher College of Business community, I am personally committed to the highest standards of ethical behavior. Becoming a leader comes with great responsibility and I am ever mindful of my actions and the impact they have on my community. I hold myself to the highest standards and will adhere to the following tenets:

Act with Honor – My actions will be guided by what is honorable and moral, and not just what leads to success. I pledge to act with honor and integrity in both my academic and professional career, as well as in my social life.

Respect for All – I understand that we live in a large and diverse community, and as a member, I acknowledge the richness of this community and pledge to be inclusive and respectful of one and all. I will be civil and courteous in my words and actions toward others.

Give Back – I recognize that I would not be successful without the help of so many others. Implicit in this belief is my responsibility to help others reach their own goals and ideals. As a leader in the community and business environment, I pledge to live by these principles and celebrate those who share these ideals.

FLEXIBILITY

While the syllabus is a course plan, I reserve the right to make modifications based on my professional judgement to this plan throughout the course. To be clear the content and objectives of the course will remain the same but the *manner* in which we go about achieving these objectives may necessitate modification. It is best to adopt a flexible mindset and recognize that while the syllabus is a contract that a contract implies trust. Trust that I am qualified to make these judgements. Trust that I have your best interest in mind. And a trust that I intend to earn.

DISENROLLMENT

University Rule 3335-8-3 provides that a student may be dis-enrolled after the third instructional day of the semester, the first Friday of the semester, or the student's second class session of the course, whichever occurs first, if the student fails to attend the scheduled course without giving prior notification to the instructor.

ACADEMIC MISCONDUCT

Academic misconduct will **not** be tolerated. According to University Rule 3335-1-31-02, all suspected cases of academic misconduct must be reported to the Committee on Academic Misconduct. Again, if I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

Other sources of information on academic misconduct (integrity):
The Committee on Academic Misconduct web pages (COAM Home)
Ten Suggestions for Preserving Academic Integrity (Ten Suggestions)

DISABILITY SERVICES

The Office of Disability Services verifies students with specific disabilities and develops strategies to meet the needs of those students. Students requiring accommodations based on identified disabilities should contact the instructor at the beginning of the semester to discuss his/her particular needs. All students with a specific disability are encouraged to contact the Office of Disability Services to explore the potential accommodations available to them.

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CLASS SCHEDULE (subject to change – Carmen course page will reflect any changes)

Week 1 Intro + Excel Review

Week 2 Modeling Objectives + Simple DCF template + Forecasting

Week 3 Python

Week 4 Simple DCF Presentations + Peer review

Week 5 Detail DCF

Week 6 Detail DCF + Growth Valuation Model

Week 7 DCF presentations

PLEASE REFER TO THE COURSE CARMEN SITE FOR ASSIGNMENT SCHEDULE