Study in Valuation: Fin 6438
Module 4, 2017
Course Syllabus

Instructor Information

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Course Objective:

The objective of this course is to apply the concepts and analytic techniques taught in other courses offered in the Graham-Buffett course sequence to create a professional valuation analysis.

Materials for Course

Course Packet available at Target Copy – contains a number of articles pertaining to first three lectures discussing stock screen methodologies. A second packet may contain and a 10-K and 10-Q materials for a firm yet to be chosen for valuation.

Course website: To minimize packet costs I will see how many of readings I can legally post on the Canvas class website.

Class handouts: There will be a number of class handouts (like a discussion of the equity risk premium and the cost of equity). Most of these (and my own valuation models) will be posted on the class site.

Suggested familiarity with a valuation book (or valuation basics): Two recommendations:

Corporate Valuation: Theory Evidence and Practice, Holthausen and Zmijewski

This first recommendation is a bit more technical. Another good practitioner book that has been used in Measuring and Managing Value is

Valuation: Measuring & Managing Value the Value of Companies, Tim Koller, Marc Goedhart, and David Wessels (5th or 6th edition)

I did not order either book since most of you have one of them. They are available on Amazon.com. **Neither book** is required. We will go through a very detailed valuation analysis for one firm, and I will have extensive notes on that valuation and detailed spreadsheets as well.

The Valuation Analysis

The course requires that each student analyze one stock in depth or two students analyze two stocks in a particular industry in depth. The valuation analysis will consist of an analysis of an industry as well as a valuation study of your company (or companies) in that industry. Students may select the industry and companies that they wish to evaluate (**with instructor approval**).

The results of this analysis will be presented in a written report to be entitled: *Valuation Analysis of "Name of stock(s)".* The report with excel files that back up your analysis should be given to me in hard copy. You should also send the report and any excel files relating to it to my e-learning page under final assignment. These are due on the Friday after the last day of class. Note: Important spreadsheets should be in the paper, not just referenced to excel file. For example, the DCF model that generates your valuation should be in the written version of the paper. The excel file allows me to assess if there are "minor" errors that cause odd results that are not observable in paper. Don't refer me to your excel spreadsheets in the text of your paper. You should also not give me standard annual reports, 10-ks, or 10-qs since they are readily available to me online. You should reference them, or any other source, in the paper.

Many of the things that should be considered in this valuation analysis, as well as the procedures used in the valuation, have been discussed in other courses in the Graham-Buffett Course Sequence or MSF classes. It would be very useful to review your notes from these classes. This syllabus contains some suggestions to help you in your Valuation Analysis.

The advantage of analyzing more than one firm in an industry of your choice in a two person project is that the desirability of any one firm as an investment vehicle may be conditional on the quality of its primary industry rivals. Besides, one method of valuation – multiples of comparable firms - will require you to collect some information on at least 3 or 4 firms that are similar to the firm you are analyzing. I suggest that the industry be one that you have some familiarity with and that you have some confidence in your ability to make ballpark projections about the future earnings profile of firms in the industry. If you have not already chosen an industry and companies in that industry, I have a few suggestions at the end of this write-up. A two person paper also has some modest economies of scale.

Course Description

This course stresses the practical applications of valuation to those that participate in the practice of money management. The course is particularly geared toward the following audiences:

1) individual investors
2) those who wish to work for mutual funds (hedge funds) that actively manage money
3) security analysts
4) those who wish to participate in the private buyout industry or mergers & acquisitions

The approach of the course is as follows. First, why is it possible that active money management may be able to beat "passive" asset management? A rationale for why the efficient market theory "does not always rule" is given. Second, we follow the methodology that a value oriented mutual fund (or hedge fund) might follow. We identify a set of stocks through mechanical sorting mechanisms that might, on average, outperform (or under perform) the overall market. We demonstrate that many of these sorting procedures could have been used HISTORICALLY to identify PORTFOLIOS of stocks that over or underperform market indices. Recent evidence suggests the effectiveness of these sorting mechanisms has been diminished, but not eliminated.

We talk about the strengths and weaknesses of these sorting techniques and generate sorts using Bloomberg to identify a set of stocks that you might find attractive or that you might want to avoid. We will also use some variants of an EVA based valuation model to do some crude valuations of a number of notable companies and a number of companies that are identified by the sorting mechanisms. We will also review evidence on the effectiveness of using these EVA models as a means of distinguishing stock market winners and losers. While the sorts and the EVA valuations are helpful, they all are susceptible to various problems and are generally devoid of detailed economic analysis. They just use current accounting figures or consensus earnings figures that may not fully capture firm value. Hence, we turn our attention to more "detailed" valuation methodologies like DCF.

Before going into detailed DCF analysis (and if appropriate multiple analysis) on individual firms, I will also spend a session on "Macro-Valuation." In particular, an examination of the Shiller CAPE (cyclically adjusted price to earnings ratio). Variants of this have been used to compare S&P 500 valuation to "normalized earnings." We will discuss the value of this approach and in the process use it to back out what might be deemed a reasonable risk premium that is embedded in the cost of equity and WACC of companies in today's market.

A number of class sessions will be devoted to instructor presentations of what constitutes a good valuation analysis. This will give you a good idea of what I am looking for in your projects and will also serve as a review of key valuation concepts you were exposed to in prior courses. In doing so, however, we will spend some time discussing whether the aggregate stock market is under or overvalued and how aggregate stock market data can be used to estimate market risk premiums for use in calculation of a weighted average cost of capital.

I currently plan to conduct analyses that go into various levels of depth on 2 or 3 companies. My first valuation likely will be a relatively simple valuation of Lowes. The past couple years, Lowes has been deemed a buy by my analysis, but the price has gone up considerably. Lowes is very straightforward and contains few "wrinkles." After Lowes, I will l do one or two more detailed valuations of firms that have more "intricacies" (multiple lines of business, foreign currency issues, pensions) and where accurate forecasts of future business trends are a bit murkier. Since the course is done in "real time" I will identify a few good "value candidates" – firms with currently high levels of cash flow relative to equity value. In recent years, I have done Xerox, but they recently did a spin-off, so I might have to change gears. I will do one very detailed valuation of one of the above firms and (time permitting an additional valuation as well).

We may (<u>or may not</u>) have one open class date before your class projects are due. If no class on that day, I will have extended office hours. I have regular office hours, but you can also arrange to meet by appointment. **YOU SHOULD PLAN ON MEETING WITH ME WHENEVER YOU ARE HAVING DIFFICULTY WITH YOUR PROJECT**. This class should be viewed as <u>an opportunity to get the basics of valuation right before you leave campus</u>. Most of you have listened to lectures, taken notes, and read relevant materials. Few of you have done a <u>detailed</u> valuation analysis of a company.

The final couple of class sessions (days) are reserved for you to make class presentations of your findings. This kind of depends on class size. This gives you an opportunity to share your findings with the class. If you choose to present, you may get useful feedback to tweak your paper. There is simply not enough time to have everyone present.

Note: An advantage of presenting your analysis "sooner" rather than latter is that you might get valuable feedback before you submit the paper to me.

Grades

Grades will be based on your Valuation paper. Also, if you choose to volunteer and make a good presentation, I will take that into consideration if your paper is between two grades. I will also take into account quality comments made in class.

Class Schedule: (class notes are made available in class or on line)

Feb 28: Initial Class Meeting (What are we up to here, minimal topic coverage)
March 2: Lecture on generating trading rules (Value, momentum, and refinements)
Reading: From Intelligent Investor (Chapter 8 & 20 – in course packet)
Momentum & Value strategy papers (course packet or Web)

March 14: More on Screening & Intro to EVA models as screening tool
Reading: Measuring Wealth paper (course packet)
Chan, Karceski, Lakonishok - Persistence of Growth Rate (packet)

March 16: EVA valuation continued
March 21: Macro Valuation and Cost of equity (handouts on web)
March 23: Valuation Analysis (Lowes)
March 28: Valuation Analysis (Firm to be named)
March 20: Valuation Analysis (Firm to be named)
April 4: Valuation Analysis (Firm to be named)
April 6: Valuation Analysis (Firm to be named)
April 11: Valuation Analysis (Firm to be named)
April 13: All day office hours for last minute "problems"
April 18: Class presentation
April 20: Class presentation

Note; If ahaead of schedule I may set aside a day for "suggested" meetings to make sure that you are making progress on your project

PAPER OUTLINE (what I expect)

Table of Contents

Executive Summary

For each firm you should briefly assess each firm's business prospects and issue a trading recommendation (Buy, Neutral, Sell). You should briefly give the basis for your recommendation including a brief summary of the major opportunities and risks facing your companies. Remember a buy recommendation should be used with great care and remember about this summary that I said brief!

Your cover sheet should also include

Book to market value of equity
Market capitalization
Price to trailing 12 month earnings
Price to forward consensus earnings (if there are EPS forecasts)
Consensus 5 year EPS growth forecast (if there are EPS forecasts).
Net Insider buying/selling last 3 months

Free Cash flow yield (CFO – Capital expenditures)/Market vale equity
(CFO-Cap ex)
Any additional metrics that are value oriented or risk oriented like beta.

Overview of each firm

Business Overview (what does firm do, how is business going, major events)
Recent Stock price performance (explain any sharp moves if possible) – Might use 4 or five year graph verse market and/or peers (often in firm disclosures)

Industry Competitive Analysis

Prospects for industry growth
Rivalry Among Existing Firms
Threat of New Entrants
Bargaining Power of Buyers
Bargaining Power of Suppliers
Threat of Substitute Products or Services

Strategies of your firm & an assessment of their effectiveness

Cost Leadership strategy and/or
Product differentiation strategy and/or
Focus (niche) Strategy
SWOT analysis (Strengths, weaknesses, opportunities, threats)

Management Quality

Past Track record of success or failure
Management integrity (if possible to assess)
Past track record on use of firm cash (Are managers good capital allocators?)
Depth of management team

Financial Ratio analysis past 5 years (and average for ratios)

Income Statements:
Sales growth, Gross margins, operating margins, depreciation to sales ratio
Effective tax rates on equity and EBIT and marginal tax rates
Balance Sheet:
Assets and liabilities as a percent of sale
Leverage ratios (debt to equity)
Firm's historic profitability: ROE, ROOIC (operating on operating invested capital)
Statement of Cash Flow: Evidence of repurchases, stock issues, and free cash flow generation in past (how has firm used cash)

Note: much of this section sets up your assumptions about the future with respect to certain ratios used in forecasting like working capital to sales ratios.

Valuation of firm (methods)

Discounted Cash Flow based entity valuation with detailed spreadsheet model

Comparable Price Multiples

Price to year ahead (if possible) consensus earnings forecast

Equity valuation implied by Enterprise Multiples

Optional: EVA valuation model if you think it adds anything

Investment Intangibles

This might include whether management is "signaling" that they are confident (or not) in the firm's prospects. Examples include recent insider trading activity, recent stock issues, recent adoption of stock or profit based incentive schemes, and stock repurchase activity. You might also note recent earnings and price momentum registered by the stock

Recommendations: (Buy, Sell, Neutral)

Include a brief summary of major opportunities and risk facing the firms.

May also distinguish between long and short term investment prospects (as odd as that may seem)

Final submission should include copy of 10-K or similar document that has firms financial statements. You should send spreadsheets (excel) used in analysis, and probably not more than 15 pages single spaced (EXCLUDING tables and graphs)

Comments:

The valuation models will be based on DCF analysis of the type stressed in your prior courses and outlined in the valuation text. You should use the entity valuation model discussed in prior courses. This requires deriving a WACC for each company and cash flow forecasts based on a clearly illustrated set of assumptions. This also requires a set of assumptions to justify a continuing value calculation. The entity valuation also requires adjustments for options, pensions, debt and non-operating assets. I also have suggested comparing the multiple on your stock to those of competitors. In a class presentation (and in your write-up) it might be worth explaining why the multiples differ among competitors.

<u>Sources of information</u>:

Below is a list of potential sources. The best data source in my estimation is the SEC Edgar files that give the raw filings of companies. This beats some, but not all, computerized data bases that sometimes lump accounting numbers together in a questionable fashion. Also, getting the raw SEC files (10-Ks) is necessary to get a look at a firm's financial statement footnotes, a good initial introduction to each firm and its strategies, competitors, etc… Most firms also have access to their 10-ks and/or annual reports in PDF format in the investor relations section of their websites.

To dig deeper about individual companies, I suggest the following strategies. First, read trade publications (if available) that talk about a firm in the context of its industry. Second (if possible), talk to customers and workers of the firm. Third, talk to security analysts that follow a particular firm. These people might (or might not) be helpful with respect to getting information. Some companies also list the security analysts (and their phone numbers) that follow them on their websites. You might also download at least one analyst's report on the firm and get its Value Line sheet from the library (business website). This will give you a feel for how other informed parties are forecasting future performance variables. Look for initiating reports by analysts. These often go into great detail about the firm. Investor relations may be helpful in getting a list of names and numbers of analysts. IR people may also give their estimation of their business rivals or refer you to the CFO. For smaller companies, the CFO might even talk to you if you have questions about the company. Company websites can also be a good source of information about the company and recent press releases about the firm. Many websites also contain a link to the firm's most recent conference call with analysts. You can hear the questions analysts have about the business and how management responds to those questions. Management will also frequently give "guidance" at these events. PDF files of recent SEC filings like 10-Ks and 10-Qs are also often available on the company site via links. NOTE: Be informed when you talk to investor relations, CFOs and/or security analysts. These are busy people and they will not suffer fools lightly!

Other valuable internet sources include:

UF library: on-line access. You can go to business page

Lots of great stuff here – including:

The Company Information Center prompt at the UF business library (online) has lots of great links that talk about the company and its industry. Click on the Company Center tutorial and it will give you lots of tips for researching firms. Among the websites of value:

OneSource: Firm and Industry information and some analyst reports online.

> Analyst reports can be downloaded as PDF files. They give you some nice (if possibly too optimistic) examples of spreadsheet forecasts. This site has many valuable items. You can download 5 year historical excel spreadsheets of financial statements as they appear on the firm's own disclosure as well as segment data. The site also gives industry reports, significant developments, news articles, mechanisms for identifying peer companies, and other resources.

For some firms wit will also discuss strengths & weaknesses of firms and strategic initiatives. Great site.

Value Line Publication (On Line library)

Not a bad source to start with. Value Line gives you some pretty good summary of operating numbers over the past 10 years. This is good if you want to look for stocks with a decent operating history (sustained high ROEs) that might be currently trading at historically low multiples relative to the market or the stocks own trading history. It is now available – at least for larger firms on the library website. NOTE: Value Line betas tend to make more sense than many other betas put out by other sources!

Hoover's Online

This is an excellent online service. In-depth company profiles can be had and lots of links to other worthwhile research tools (industry trade magazines, insider trading, etc..) can be found, information on competitors and comparable firms)

Standard & Poors: Nice industry surveys

IBISWorld: Good industry surveys and statistics on forecasted industry growth rates

Factiva: On UF business library site

Has more extensive database of recent news about your firm. You can do news searches for all data sources in Factiva and come up with some pretty good news stories about your company, some from local newspapers. Factiva also sometimes has transcripts of conference calls (as do many company sites)

Beyond the University Library websites:

Yahoo Finance – (http://finance.yahoo.com)

Tons of information or links to information like insider trading activity and links

Securities Exchange Commission Edgar database (www.sec.gov)

This is the SEC site for Edgar. Besides the 10Ks, other filings of interest are:

10-Qs: Quarterly earnings updates and analysis of firm performance. Right now, for many companies the most recent data available is a 10-Q. For firms with fiscal year end in December, many 10-Ks won't be available until March 31!

8-Ks: Significant events affecting the firm (important press releases, merger announcements, share repurchases, etc..)

Def-14A: Proxy statement that includes information on managerial ownership.

Bloomberg Terminals:

Most of you have accessed Bloomberg data in the Capital Markets Lab. Besides stock screens, up to date stock market betas can be calculated on Bloomberg. Information on the value of company debt issues is also frequently available.

Capital IQ:

I have not used this extensively, but this is also a rich database that some of you may be familiar with from other courses and may even use as a primary site for information.

Certain stock screening results can be constructed using the Ken French website:

http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html#Research

Some Advice on Firm Selection:

Obviously, there are many firms to consider. I might recommend firms that are fairly easy to understand. You might also want to look at stocks that fall out of certain “value” screens.

Some businesses are fairly easy to understand and make some rudimentary projections on (unlike the Software business to name one example) and others are not. Each of you has a different familiarity with certain industries (a circle of competence). Stick to those that you understand best or perhaps have some great motivation to know better.

I don’t discuss financial firms too much and valuing them is an even murkier exercise these days with the lack of ability to price the assets on their balance sheets. You might want to steer clear of financials unless you have a burning desire to know them better.

Time permitting I may talk about valuation of Financials if there is sufficient interest