

<b>Jon M. Huntsman School of Business</b>	
<b>Course Assessment: Financial Statement Analysis and Valuation</b>	
<b>Accounting 6620</b>	<b>Fall 2010</b>
<b>Instructor: Jeffrey T. Doyle</b>	

**Section 1: Overview of the Course**

Accounting 6620, Financial Statement Analysis and Valuation is a graduate class in the Masters of Accounting (MAcc) program. The enrollment for the Fall 2010 semester was 27 students. The purpose of the class is to learn the basic accounting standards about valuation, enable students to gather and analyze historical information about a business, create forecasts of future sources of value, and utilize those forecasts to estimate an intrinsic value.

*Section 1.1 Huntsman School Vision*

<b>Huntsman Pillar</b>	<b>Emphasis</b>	<b>Discussion</b>
Ethical Leadership	Low	There is some discussion of evil managers and earnings management.
Global Vision	Low	There is some discussion of global markets and international accounting standards.
Entrepreneurship	Medium	Financial statement analysis and valuation play critical roles in entrepreneurial activities. The tools learned in this class can enable students to analyze and create entrepreneurial opportunities.
Analytical Rigor	High	The main contribution of this class is in providing complex analytical tools that student can use to analyze and value business enterprises. Advanced theories and information gathering, organizing, and analyzing form the core of this course.

*Section 1.2 School of Accountancy Learning Goals*

<b>Learning Goal</b>	<b>Emphasis</b>	<b>Discussion</b>
Professional Skills: Research complex accounting-related issues and apply findings in various decision settings	High	In all of the nine learning objectives for the class (shown below), students obtain financial information for specific companies and use that information to make valuation and credit risk decisions. Students learn how to research companies using data from SEC reports, analysts, financial statement data providers, historical stock returns, etc.
Professional Skills: Develop, measure, analyze, synthesize, validate, communicate, and make professional judgments relative to financial and other types of information in problem solving and decision making	High	The principal decision-making skill taught in the class is how to analyze and value a business. Throughout the course, students obtain and analyze financial information, synthesize that information to create forecasts, and reach a decision about the valuation of a business. Students use time value of money concepts, statistical analysis, and other tools to solve real-world problems.
Professional Skills: Oral and written communication in the context of accounting-related matters	Medium	On assignments and exams, students are required to present their results in a rigorous written format. The students also complete a final project that is partially assessed for written communication skills.

Professional Values and Attitudes: An appreciation for the need to continue life-long learning to maintain professional knowledge and skills	Medium	The ability to independently access and analyze financial information is a skill that will be useful throughout the students' professional careers.
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## Section 2: Learning Objectives

The organization of my nine learning objectives for the course follows the chronological content delivery of the class. Under each of the main objectives, I have listed the more detailed knowledge and skills that I expect each student to obtain.

<b>Learning Objectives</b>	
1.	<p>Students will gain a broad understanding of markets, valuation theory, and valuation-related accounting rules</p> <ul style="list-style-type: none"> <li>• Understand the concepts of market efficiency, including the theory's assumptions and detractors</li> <li>• Understand and implement fundamental and technical analysis</li> <li>• Understand and identify the sources of investment value and their link to basic valuation theory and models</li> <li>• Understand and apply valuation-related accounting rules (fair value methods, fair value hierarchy, etc.)</li> </ul>
2.	<p>Students will be able to identify and access sources of information for use in analysis, forecasting, and valuation</p> <ul style="list-style-type: none"> <li>• Understand the importance of information to markets and how to think about the quality of that information</li> <li>• Obtain, calculate, and statistically analyze market returns (basic regression analysis) for individual stocks or indices</li> <li>• Obtain and calculate basic valuation ratios</li> <li>• Acquire and analyze analyst information (forecasts, target prices, etc.)</li> <li>• Obtain historical financial information for a firm and understand how data providers (e.g., Compustat) organize and categorize financial data</li> <li>• Import financial statements into a valuation spreadsheet</li> </ul>
3.	<p>Students will be able to analyze financial statements and other data to assess a firm's strategy and its success vis-à-vis its competitors</p> <ul style="list-style-type: none"> <li>• Understand the basic forces of competition in markets and the determinants of success</li> <li>• Conduct a basic ROE analysis</li> <li>• Conduct an advanced ROE analysis, including the decomposition of financial statements into operating and financing pieces</li> <li>• Understand how growth is analyzed and calculate sustainable growth rates</li> <li>• Understand and analyze margins, turnover ratios, and economies of scale</li> <li>• Understand and apply the concept of mean reversion to investing</li> <li>• Understand the concepts of credit risk and loss given default</li> </ul>
4.	<p>Students will be able to assess the quality of a firm's accounting information and understand the risks inherent in the accrual system</p> <ul style="list-style-type: none"> <li>• Calculate and understand the market-to-book ratio (economic vs. accounting assets)</li> <li>• Understand and be able to articulate the inherent limitations of book value versus market value</li> <li>• Understand why accruals "go bad" in general (evil managers and foggy crystal balls); explain (and replicate) the accrual anomaly; understand cash versus accrual accounting and how they both can be</li> </ul>

manipulated

- Understand and be able to detect the concepts of noise and bias in information (both statistically and how it applies to estimates of financial information, including accruals)
- Calculate the cash and accrual components of income (both the NI/CF method and the balance sheet method) and identify what constitutes a red flag
- Analyze the risks associated with specific accruals on the balance sheet (e.g., accounts receivable and inventory)

5. Students will be able to use financial and accounting analysis to forecast future firm fundamentals (earnings, cash flows, balance sheets)

- Understand and be able to implement the systematic forecasting framework for all financial statements
- Understand and apply general forecasting concepts such as the forecast horizon, terminal period assumptions, etc.
- Obtain historical information and other relevant information and create a reasonable set of forecasted financial statements that are internally consistent for a specific firm
- Understand and be able to analyze non-GAAP earnings and their properties; understand the clean surplus relation and the all-inclusive principle

6. Students will understand the concept of risk and be able to calculate appropriate risk-adjusted discount rates

- Understand the concepts of risk, margin of safety, and diversification
- Know some practical ways to limit risk in investing
- Understand different investing vehicles (mutual funds, hedge funds, etc.)
- Estimate the cost of equity capital for a firm (understand CAPM, calculate beta from scratch, calculate an earnings beta, and utilize size portfolio returns)
- Understand and be able to calculate an implied cost of capital

7. Students will understand different valuation models and be able to use fundamental forecasts and a discount rate to arrive at an estimate of firm value

- Calculate cash distributions under a DCF or residual income approach
- Understand and be able to implement a basic DCF model to find a current value
- Understand and be able to implement a basic residual income model to find a current value
- Understand the assumptions that make the DCF and residual income models equivalent
- Calculate and utilize present value techniques (formulas, Excel, and calculators) and perpetuity formulas

8. Students will understand valuation ratios and be able to use them in a comparable market analysis and in trading strategies

- Calculate and understand market-to-book, price-to-earnings, and other valuation ratios
- Use market multiples and comparable analysis to value firms
- Understand how valuation ratios can be mathematically derived from the more complete residual income model and be able to identify the key drivers of these ratios
- Identify and be able to use segment data for use in comparable analysis
- Understand some common trading strategies
- Implement a trading strategy and understand how ideas are generated and back tested

### Section 3: Learning Activities

My learning and assessment activities are organized around the following teaching model, which is included in my syllabus.

- (1) The students read/skim/browse the new material before coming to class to better understand the class discussion.
- (2) The professor teaches the new material with class participation.
- (3) The students practice by completing the related assignment.
- (4) The professor and students review the solution to the assignment in class, providing feedback on what was taught and further clarifying the material.
- (5) Building on the initial feedback, the students are given additional practice problems and a review session to ensure learning has occurred.
- (6) An exam is administered, covering the concepts taught.
- (7) The exam is reviewed together by the professor and students to help students understand any problems they may have missed.

The learning process in this class is generally as follows:

- A reading assignment is given to allow students to preview the upcoming material. In addition, a set of original PowerPoint notes are posted on Blackboard for students to preview and bring to class to guide class discussion (I never actually use PowerPoint in class, but the notes help focus the discussion)
- During the first class period for a new topic, I lecture about the new material. I like to use class discussion whenever possible, short humorous videos to emphasize a point, and real-world examples to show the applicability of the material.
- An Excel assignment template (with a separate tab for each problem) is posted on Blackboard for the students to complete. All of the problems for this class are original problems that I have created.
- On the day the assignment is due, each student sends me the completed template (in Blackboard email) at least 10 minutes before class begins. Each student prints out their solution and brings it to class for discussion. Students can work together on the assignments, but everything they submit for grading must have be their original input.
- During class we review the assignment together with heavy student involvement. As we review the assignment, I continue to make additional points about the material, including things we may not have had time to cover in the original lecture. After class, I post my solution to the assignment on Blackboard for the students to review. I grade each assignment, based on effort on a scale from 0 to 3 points.
- Before the Midterm and Final Exams, I post additional practice problems in nearly the same format as the original assignments. Each new practice problem is on one tab, with the solution to the problem on the next tab. Students are encouraged to try the problem on their own first and then look at the solution.

- I distribute the Doyle Study Guide before the midterm and final exams. The study guide gives a list of possible topics for the exam in the form of an outline.
- Before the midterm and final exams, I hold a review session to clarify any assignments, practice problems, or items on the review guide.
- I give the midterm and final exams, which tend to be long and fairly comprehensive. The exams consist of a multiple choice / short answer section and a longer problem section. After grading the midterm exam, we go over the problems in an after-class session. I retain all exams, but students may come to my office to review their test.

My detailed learning activities for each of my nine learning objectives are included in this report in the first column of Table 1.

#### **Section 4: Assessing Student Learning**

##### *Section 4.1 General Assessment Overview*

The student assessment process in this class includes many informal feedback mechanisms such as interactive class discussion, assigned problem sets that are graded by me, office visits and emails from students, and review sessions. More specific, graded student assessment occurs through the 1) midterm exam, 2) the final exam, and 3) the final project, which is an application of most of the concepts and skills learned throughout the semester. A summary of these assessment activities is below:

- Assess class understanding through interactive discussion as the material is being taught (encourage questions, cold calls, etc.)
- Use class cards (index cards with student information and photos) and random selection to ensure all students can participate in discussions
- Review assigned problems in class with discussion; gauge problem areas from student feedback
- Grade student assignments (note that I grade these based on effort, rather than correctness)
- Encourage and respond to student questions via email (within 24 hours) and during office hours
- Provide detailed solution sets on Blackboard for student self-assessment of learning prior to testing
- After the initial problem set, provide an additional practice assignment for student self-assessment prior to testing
- Conduct review sessions prior to each test and assess the level of student understanding
- Grade final project (10-15 page valuation report)
- Grade midterm and final exams

- Multiple choice questions on concepts
- Short answer calculation problems
- Short essay questions
- Longer financial analysis problems
- Longer essay and analysis problems

### *Section 4.2 Detailed Assessment*

My detailed assessment activities for the midterm exam, the final exam, and the final project are included in this report in the second column of Table 1. They are organized under each of my eight learning objectives, with each midterm and final exam problem being assigned to a learning objective. The detail of this mapping of exam problems to learning objectives is detailed in Tables 2a and 2b. In general, my goal for the student in a graduate class is that they achieve 80% mastery of the material. As such, in Table 1 I have indicated the performance level for each learning objective and the individual questions where performance did not reach 80%.

### *Section 4.3 External Validation*

My external validation activities included:

- Before the class started, I reviewed textbooks, course materials, and exams from financial statement analysis classes at the University of Michigan, the University of Washington, the University of Utah, and Stanford University. My goal was to make my teaching and testing similar to the rigor found at these programs.
- Throughout the Fall 2009 semester, Professor Rick Johnson from the Huntsman School attended my class and gave me feedback on my teaching, the level of understanding of the students, the textbook, and my assignments.

## **Section 5: Incremental Contribution and Continuous Improvement**

This section documents the incremental contribution (or value-added) that I am bringing to the classroom beyond using the textbook, supplied slides from the publisher, and test bank questions. I also discuss the implementation of ideas from past assessments, as well as my ideas for further improvement derived from student performance, student evaluations, and peer evaluation during the semester.

### *Section 5.1 Incremental Contribution*

Some of my contributions to the class include:

- Class discussions are informed by my work as a CPA at Arthur Andersen, my research in capital markets, and my consulting with Wall Street analysts and hedge funds
- All of my PowerPoint slides, which I don't use during class but are used by students for notes, are original
- All of my assignment problems and practice problems are original, including the Excel template format and submission procedures
- My assigned problems make use of real-world companies and data from SEC filings, Yahoo Finance data, current analyst reports, and S&P financial statements
- My assignment problems make use of interesting, selected reading from Warren Buffett and Benjamin Graham
- The GAAP-LAND case used for understanding the accounting environment is original
- Special discussion on "what is value" that could be developed into a teaching case
- Special discussion on "evil managers and foggy crystal balls" that is partially developed into a teaching case
- I bring original research into the classroom, including two of my own papers on trading strategies
- I customized the eVal Excel software for better use with specific USU library resources
- Original Doyle Study Guides created for exam review. All of my exam questions are original
- The final projects are original formulations that require students to access and analyze real-time financial data to value companies or create trading strategies

### *Section 5.2 Changes in Course Due to Past Assessment*

This was the second time I have taught the course. Several of my changes below were in response to last year's teaching assessment.

- Last year's comment: "I would like to add more accounting-specific content to the class. I could have the students become familiar with the GAAP definition of fair value and how it is to be applied in practice. It would also show how the valuation methods we are doing in class relate to the existing accounting literature. It might also be productive to add a detailed accounting-based valuation case to the class. Some other content would have to give, but it would be good for the MAcc students to see how what we are doing applies in their careers. This is probably my biggest priority for next time."

I added an additional "sub-objective" to my first learning objective (related to accounting fair value knowledge). We read GAAP ASC 820 about fair value, and I created a new problem on this (P1-5). We used this as a foundation for discussion throughout the semester, and it was tested on the midterm exam. Very good change to the class!

- Last year's comment: "The assignment templates, PowerPoint notes, and the assignment solutions were not always posted timely. I definitely need to do better at this next time."

I did a much better job posting things in a timely manner this year. However, this did not seem to help the students' perception of the workload.

- Last year's comment: "The midterm exam was way too long. There was too much open-ended writing involved. The final exam was just about right. I need to really review these first-time tests next year."

This was a total failure on my part on this item. The midterm exam was even longer than last year. I will try again next year.

- Last year's comment: "The modification (and simplification) of the eVal software to utilize the USU library's available data worked very well. It might be worthwhile to rebuild a valuation spreadsheet from scratch myself, rather than use eVal. The customization might better serve my specific learning objectives. Also, should I allow the students an opportunity to build their own valuation template? The costs are huge due to the class not being on the same page, but maybe I could inch a bit more in this direction."

I did not change anything for this. However, I am developing my own spreadsheet in 2011 that will have the students more involved in building their own templates.

- Last year's comment: "The first time through the discussion on several complicated topics (especially advanced ROE analysis and accrual calculations) was confusing and poorly taught by me. The assignments on these topics were too long. I need to break the topics and the assignments down into more reasonable chunks next time."

I did break down the assignments into more manageable chunks this time. The teaching of advanced ROE analysis and accrual calculations was better, but still a bit rushed. Should I delete some other material to have more time? I'm not positive how valuable the accrual calculations really are.

- I redid several problems for the first learning objective. The determinants of value problem (P1-3) is much better and does a nice job comparing bonds to stocks. P1-4, “Valuing the Luscious Lemonade Stand,” was also a bit better.
- I added P2-5, “Pulling Data from WRDS,” which worked well. It was nice to introduce them to WRDS and Compustat, but it was a too brief foray, and we never used that skill again in the semester.
- I added P3-1, which analyzes Walmart’s strategy. It was nice to have an explicit problem on this. They did some reading of Porter’s Five Forces for this.
- I changed the grading on the final project – breaking it down into several subject areas. I think this helped in my assessment of their work and grading of the project.
- I dropped the learning objective on credit risk, and folded that content into the financial statement analysis part.

*Section 5.3 Student Evaluations*

The overall student evaluations for the course were mostly positive (see summary below). The real negative outliers on the numerical scores were for the textbook (score of 5.0) and the appropriateness of the workload (score of 5.1); last year, these two were the lowest as well (both 5.0). I agree that the textbook has some issues, but I had a hard time finding a better replacement after reviewing several others. In 2011, I plan on teaching the class without a book, just using my own readings, etc. We’ll see how that goes!

There were some complaints about the workload in the class again this year, and I guess that is both a positive and a negative. The assignment templates were more promptly posted this year (and a little bit shorter than last year). I doubt I will lessen the workload much the next time the class is taught – I would rather have a little too much work than not enough. However, it might be nice to discuss setting higher, uniform outside-of-class workloads for the department for graduate students.

<b>Student Evaluations Summary</b>	
General evaluation	Overall quality of the course = 5.6 (last year 5.6) Instructor’s effectiveness = 5.8 (last year 5.6)
Information about the course	All of the scores were in a range from 5.6 to 5.8 for assignments, exams, grading, etc. However, the outliers were 5.0 for helpfulness of the texts/readings and 5.1 for appropriateness of the workload, and 5.2 for fairness of

	grading procedures.
Information about instruction	These ranged from 5.5 to 6.0, with 6.0s for enthusiasm for the subject, opportunity to ask questions, and opportunity to comment and express opinions.
Comments from students: aspects that were especially good	<ul style="list-style-type: none"> <li>• Quite a few comments on enjoying the rigor of the class (“satisfyingly challenging” “made me think more than any other graduate class”)</li> <li>• Several comments on how the class was good for accountants and should remain in the MAcc program</li> <li>• Some comments on instructor enthusiasm and real-world applications</li> </ul>
Comment from students: changes that could be made for improvement	<ul style="list-style-type: none"> <li>• Several comments that the workload was too high; assignments too long and not worth enough points;</li> <li>• Several comments on the tests being too long and that maybe there should be more of them (but shorter); grading was too subjective</li> <li>• Several comments related to improving the project (especially starting on it earlier)</li> </ul>

#### *Section 5.4 Ideas for Future Improvement*

- I am not going to use the same textbook next year. I am going to prepare my own set of readings for the class. This will be a big undertaking, and it might have some problems (especially the first year).
- I will also be developing my own valuation spreadsheet for the students to use. I would like to get them involved in the creation of their own spreadsheet, but we’ll see about the tradeoff between individual student learning and uniformity.
- I would still like to add more accounting valuation content to the class – possibly an additional teaching case or valuation of other financial instruments, like derivatives.
- The midterm exam was way too long - again. There was too much open-ended writing involved. The final exam was just about right, but had too much unnecessary writing. I need to really review these tests next year.
- I would like to have them better able to access more data next year – possibly by improving the use of WRDS or other databases.
- The course is very U.S.-centric with almost no discussion of international applications/issues for valuation. I need more training myself to be able to improve the class along these lines. I’m also not sure if there is time for additional content in the course.
- Most of our discussion focuses on large, publicly traded corporations. Should I add any small business / private firm valuation topics? Should I add more fixed income valuation problems?

- I would like to add more short videos, interactive games, etc. to increase the participation and enthusiasm in the class. The 3:00 pm start time led to some tired students.
- I would like to do the final project as we go along in the semester, rather than waiting until the end. They need more feedback (they get none, since it is turned in on the last day of class).
- I would also like to review another FSA class (Professor Damodaran from Columbia), which is available on-line

**Table 1: Specific Learning and Assessment Activities**

<b>Learning Objective 1: Students will gain a broad understanding of markets, valuation theory, and valuation-related accounting rules</b>	
<b>Specific Learning Activities</b>	<b>Specific Assessment and Performance</b>
<ul style="list-style-type: none"> <li>• Read Chapter 1, "Introduction," from textbook</li> <li>• Read "The Superinvestors of Graham-and-Doddsville" by Warren Buffett</li> <li>• Read Chapter 8 and Commentary from "The Intelligent Investor" by Benjamin Graham</li> <li>• Read ASC 820 "Fair Value Measurements and Disclosures"</li> <li>• 3 class periods with discussion of syllabus and overview of valuation, "what is value" with examples of valuing a car, house, painting, and financial instruments from a bond to a stock, and the limits of arbitrage with LTCM example</li> <li>• Assignment 1               <ul style="list-style-type: none"> <li>○ P1-1: Essay question on market efficiency, arbitrage, and risk vs. reward</li> <li>○ P1-2: Essay questions on Graham and Buffett reading (counterpoint on market efficiency)</li> <li>○ P1-3: Determinants of value; bonds vs. stocks; basic valuation theory</li> <li>○ P1-4: Calculation using basic TVM on valuing a business with P/E ratios (buy a good business, and buy it at the right price)</li> <li>○ P1-5: Questions on valuation accounting rules and the fair value hierarchy (new problem)</li> </ul> </li> <li>• Assignment 2               <ul style="list-style-type: none"> <li>○ P2-1: Calculation of daily returns and regression analysis to show an example of a random walk</li> </ul> </li> <li>• Review Assignment 1 with high student interaction</li> <li>• Practice problem PP1-1 similar to P1-3 and PP1-2 similar to P1-4</li> <li>• Doyle Study Guide distributed, summarizing main points of emphasis</li> <li>• After-class study session for Midterm Exam</li> </ul>	<p><u>Assessment Methods</u></p> <ul style="list-style-type: none"> <li>• Midterm Exam: 5 short problems (A1, A2, A6, A13, A14)</li> </ul> <p><u>Performance</u></p> <ul style="list-style-type: none"> <li>• 4.6% of all test points</li> <li>• 95.8% correct</li> <li>• No problems &lt; 80% correct</li> </ul> <p><u>Comments</u></p> <ul style="list-style-type: none"> <li>• Fairly basic questions – students exhibit good understanding, but questions could be deeper</li> </ul>
<b>Learning Objective 2: Students will be able to identify and access sources of information for use in analysis, forecasting, and valuation</b>	
<b>Specific Learning Activities</b>	<b>Specific Assessment and Performance</b>
<ul style="list-style-type: none"> <li>• Read Chapter 2, "Information Collection," from textbook</li> <li>• 2 class periods with discussion of the role of information</li> </ul>	<p><u>Assessment Methods</u></p>

<p>and intermediaries in markets and in capital allocation, incentives and quality of information, sources of information and what is available at USU library, and introduction and demonstration of eVal software</p> <ul style="list-style-type: none"> <li>• Assignment 2 <ul style="list-style-type: none"> <li>○ P2-1: Calculation of daily returns and regression analysis to show an example of a random walk (get data from Yahoo historical information)</li> <li>○ P2-2: Essay questions and data collection from an analyst report; intro to financial ratios</li> <li>○ P2-3: Import historical financial data from S&amp;P into eVal software</li> <li>○ P2-4: Reconcile the S&amp;P financial data to an actual 10-K; understand how hard it is to standardize information for cross-sectional analysis</li> <li>○ P2-5: Pulling data from WRDS and analyzing P/E ratios (new problem)</li> </ul> </li> <li>• Review Assignment 2 in class with high student interaction</li> <li>• Practice problem PP1-3 calculating P/E and M/B ratios</li> <li>• Doyle Study Guide distributed, summarizing main points of emphasis</li> <li>• After-class study session for Midterm Exam</li> </ul>	<ul style="list-style-type: none"> <li>• Midterm Exam: 3 short problems (A21, A22, A23)</li> <li>• Final Project: students had to obtain all of the information for their project from publicly available sources</li> </ul> <p><u>Performance</u></p> <ul style="list-style-type: none"> <li>• 2.8% of all test points</li> <li>• 90.1% correct on test questions</li> <li>• Final project overall average score of 91.9%</li> <li>• Students scored below 80% on A22 (75.0%): short answer interpretation of P/E ratio</li> </ul> <p><u>Comments</u></p> <ul style="list-style-type: none"> <li>• Hard to test in a closed test situation</li> <li>• My perception from final project is that students did not go very deep in their information search; they could do better</li> </ul>
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**Learning Objective 3: Students will be able to analyze financial statements and other data to assess a firm's strategy and its success vis-à-vis its competitors**

Specific Learning Activities	Specific Assessment and Performance
<ul style="list-style-type: none"> <li>• Read Chapter 3, "Understanding the Business," and Chapter 5, "Financial Ratio Analysis," from textbook</li> <li>• 4 class periods with discussion of competition and demonstration of mean reversion in ROEs, strategic tradeoffs (Walmart and Saks), basic and advanced ROE analysis and link to strategy, growth analysis, economies of scale, margins, leverage, and turnover ratios, and SNL videos on financial crisis and investing</li> <li>• Assignment 3 <ul style="list-style-type: none"> <li>○ P3-1: Strategy analysis of Walmart (new problem)</li> <li>○ P3-2: Basic ROE analysis using Walmart's actual 10-K data</li> <li>○ P3-3: Advanced ROE analysis using Walmart's actual 10-K data</li> <li>○ P3-4: Input Target's data into eVal for ROE analysis and compare to Walmart</li> <li>○ P3-5: Essay question about mean reversion</li> </ul> </li> <li>• Assignment 4 <ul style="list-style-type: none"> <li>○ P4-1: Calculation and analysis of sustainable growth rates using actual 10-K data</li> <li>○ P4-2: Analysis of economies of scale using Amazon's data in eVal</li> <li>○ P4-3: Analysis of turnover ratios in eVal using company of student's choice</li> <li>○ P4-4: Analysis of leverage and credit risk</li> <li>○ P4-5: Credit risk analysis with Walgreen and Rite Aid</li> <li>○ P4-6: Investing in Walgreen and Rite Aid bonds</li> </ul> </li> </ul>	<p><u>Assessment Methods</u></p> <ul style="list-style-type: none"> <li>• Midterm Exam: 9 short problems (A4, A5, A7, A8, A17, A19, A20, A24, A25)</li> <li>• Midterm Exam: 2 long problems (B1a, B1b, B2)</li> <li>• Final Project: students were required to perform an advanced ROE analysis and calculate other ratios</li> </ul> <p><u>Performance</u></p> <ul style="list-style-type: none"> <li>• 20.8% of all test points</li> <li>• 88.5% correct on test questions</li> <li>• Final project overall average score of 91.9%</li> <li>• Students scored below 80% on A7 (68.8%): MC conceptual problem on clean surplus relation, A8 (65.6%): MC conceptual problem on basic ROE analysis, A19 (77.3%): MC conceptual problem on mean reversion, B2c (77.3%): long problem commentary on ROE analysis</li> </ul> <p><u>Comments</u></p> <ul style="list-style-type: none"> <li>• Largest share of test points – I think this is about right</li> <li>• I was impressed by the students' performance on this part (both the tests and the project). I could tell they were accounting students</li> <li>• Biggest weakness is in their conceptual</li> </ul>

<ul style="list-style-type: none"> <li>• Review Assignments 3 and 4 in class with high student interaction</li> <li>• Practice problems PP1-4 (basic ROE analysis), PP1-5 (advanced ROE analysis), and PP1-6 (sustainable growth rates)</li> <li>• Doyle Study Guide distributed, summarizing main points of emphasis</li> <li>• After-class study session for Midterm Exam</li> </ul>	<p>understanding – they can plug and chug, but analysis is weak</p>
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**Learning Objective 4: Students will be able to assess the quality of a firm’s accounting information and understand the risks inherent in the accrual system**

Specific Learning Activities	Specific Assessment and Performance
<ul style="list-style-type: none"> <li>• Read Chapters 4, “Accounting Analysis,” and Chapter 6, “Cash Flow Analysis,” from textbook</li> <li>• 3 class periods with discussion of GAAP-LAND (using my case on GAAP-LAND), limitations of accounting and the M/B ratio, problems with accruals (evil managers and foggy crystal balls), a demonstration on the accrual anomaly and how to decompose cash flow and accrual components from net income, and the all-inclusive principle and non-GAAP earnings</li> <li>• Assignments 5 and 6 <ul style="list-style-type: none"> <li>○ P5-1: Essay questions on the limitations of accounting with Coke’s M/B ratio</li> <li>○ P5-2: Essay questions on the problems with accrual accounting</li> <li>○ P5-3: Calculation the cash and accrual components of net income using Sears’ 10-K data</li> <li>○ P5-4: Cash and accrual components using a balance sheet approach</li> <li>○ P6-1: Analysis of accounts receivable using Rent-A-Center’s data</li> <li>○ P6-2: Analysis of inventory using Cisco’s data</li> </ul> </li> <li>• Review Assignments 5 and 6 in class with high student interaction</li> <li>• Practice problems PP1-7 (accrual calculation using B/S), PP1-8 (accrual calculation using IS/CF method), PP1-9 (A/R analysis), and PP1-10 (inventory analysis)</li> <li>• Doyle Study Guide distributed, summarizing main points of emphasis</li> <li>• After-class study session for Midterm Exam</li> </ul>	<p><u>Assessment Methods</u></p> <ul style="list-style-type: none"> <li>• Midterm Exam: 6 short problems (A3, A9, A10, A12, A16, A26)</li> <li>• Midterm Exam: 2 long problems (B1c, B3)</li> <li>• Final Project: students were required to assess the accounting quality of their chosen firm</li> </ul> <p><u>Performance</u></p> <ul style="list-style-type: none"> <li>• 12.5% of all test points</li> <li>• 90.5% correct on test questions</li> <li>• Final project overall average score of 91.9%</li> <li>• Students scored below 80% on B3b (75.8%): long problem calculation and commentary on inventory analysis</li> </ul> <p><u>Comments</u></p> <ul style="list-style-type: none"> <li>• Performance on exams was quite good – they could understand the conceptual ideas and calculate simple problems well</li> <li>• Final project accounting analysis was quite shallow for most students</li> </ul>

**Learning Objective 5: Students will be able to use financial and accounting analysis to forecast future firm fundamentals (earnings, cash flows, balance sheets)**

Specific Learning Activities	Specific Assessment and Performance
<ul style="list-style-type: none"> <li>• Read Chapter 7, “Structured Forecasting,” and Chapter 8, “Forecasting Details,” from textbook</li> <li>• Read “The Predictive Power of Expenses Excluded from ‘pro forma’ earnings” by Doyle, Lundholm, and Soliman</li> <li>• 4 class periods with discussion of the systematic forecasting framework, cash flow statement derivation, clean surplus</li> </ul>	<p><u>Assessment Methods</u></p> <ul style="list-style-type: none"> <li>• Midterm Exam: 3 short problems (A11, A15, A18)</li> <li>• Final Exam: 2 short problems (A1, A2)</li> <li>• Final Exam: 1 long problem (B3)</li> </ul>

<p>relation and the plug, forecast horizons and terminal period assumptions, sales growth formulas, segment data, and EPS calculations and complications</p> <ul style="list-style-type: none"> <li>• Assignment 7 <ul style="list-style-type: none"> <li>○ P7-1: Essay questions on the systematic forecasting framework</li> <li>○ P7-2: Problem on the clean surplus relation using eVal and Hershey data</li> <li>○ P7-3: Demonstration of how cash flow statements are generating in eVal using Hershey data</li> <li>○ P7-4: Essay questions about basic forecasting assumptions and eVal</li> <li>○ P7-5: Essay questions on non-GAAP earnings based on my research paper</li> </ul> </li> <li>• Assignment 8 <ul style="list-style-type: none"> <li>○ P8-1: Essay questions about Garmin's strategic overview</li> <li>○ P8-2: More specific questions about Garmin's financial ratios</li> <li>○ P8-3: Creating forecasts for Garmin</li> <li>○ P8-4: Importing these forecasts into eVal</li> <li>○ P8-5: Using sales growth formulas for forecasting</li> </ul> </li> <li>• Review Assignments 7 and 8 in class with high student interaction</li> <li>• Practice problem PP2-1 (sales growth formulas)</li> <li>• Doyle Study Guide distributed, summarizing main points of emphasis</li> <li>• After-class study session for Midterm Exam and in-class study session for Final Exam</li> </ul>	<ul style="list-style-type: none"> <li>• Final Project: students were required to forecast a full set of financial statements for their chosen firm and explain their assumptions</li> </ul> <p><u>Performance</u></p> <ul style="list-style-type: none"> <li>• 12.0% of all test points</li> <li>• <b>72.7% correct on test questions</b></li> <li>• Final project overall average score of 91.9%</li> <li>• Students scored below 80% on A11 (71.7%); medium length description of forecasting framework, A15 (52.3%); short answer on EPS forecasts, A18 (18.8%); MC on terminal period assumptions, A1 (76.6%); short answer on financial statement plug</li> </ul> <p><u>Comments</u></p> <ul style="list-style-type: none"> <li>• Looks like a clear weakness here – possibly not reinforced well before the midterm. Forecasting is important, so this needs to be improved next year</li> <li>• Didn't see any glaring errors on final project, but not too deep on unique forecasts</li> </ul>
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**Learning Objective 6: Students will understand the concept of risk and be able to calculate appropriate risk-adjusted discount rates**

Specific Learning Activities	Specific Assessment and Performance
<ul style="list-style-type: none"> <li>• Read Chapter 9, "The Cost of Capital," from textbook</li> <li>• Read Chapter 20 and Commentary from "The Intelligent Investor" by Benjamin Graham</li> <li>• 2 class periods with discussion of the concept of risk, numerator and denominator effects, margin of safety, diversification and investment funds, discount rates, and cost of capital models (CAPM, size, etc.)</li> <li>• Assignment 9 <ul style="list-style-type: none"> <li>○ P9-1: Essay questions on risk and the margin of safety</li> <li>○ P9-2: Essay questions on diversification, focus investing, and types of funds</li> <li>○ P9-3: Cost of capital calculations (CAPM, size, industry) and discussion</li> <li>○ P9-4: Estimating Wells Fargo's return and earnings betas</li> <li>○ P9-5: Calculating and interpreting an implied cost of capital</li> </ul> </li> <li>• Review Assignment 9 in class with high student interaction</li> <li>• Practice problems PP2-2 (cost of capital calculations) and</li> </ul>	<p><u>Assessment Methods</u></p> <ul style="list-style-type: none"> <li>• Final Exam: 4 short problems (A3, A6, A11, A16)</li> <li>• Final Exam: 1 long problem (B4)</li> <li>• Final Project: students were required to calculate and justify a risk-adjusted rate for their chosen firm</li> </ul> <p><u>Performance</u></p> <ul style="list-style-type: none"> <li>• 10.8% of all test points</li> <li>• 86.8% correct on test questions</li> <li>• Final project overall average score of 91.9%</li> <li>• Students scored below 80% on A11 (71.7%); short calculation of the adjustment of intrinsic value to current date</li> </ul> <p><u>Comments</u></p> <ul style="list-style-type: none"> <li>• No real issues that I saw – my problems</li> </ul>

<p>PP2-3 (implied cost of capital)</p> <ul style="list-style-type: none"> <li>Doyle Study Guide distributed, summarizing main points of emphasis</li> <li>In-class study session for Final Exam</li> </ul>	<p>could be made more difficult with more analysis</p> <ul style="list-style-type: none"> <li>Not much to grade on final project – could emphasize a special section next time</li> </ul>
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**Learning Objective 7: Students will understand different valuation models and be able to use fundamental forecasts and a discount rate to arrive at an estimate of firm value**

Specific Learning Activities	Specific Assessment and Performance
<ul style="list-style-type: none"> <li>Read Chapter 10, “Valuation,” from textbook</li> <li>3 class periods with discussion of the concept of valuation in general, the distribution vs. the creation of value, the DCF and residual income models, the derivation of the residual income model, the effect of accounting problems, perpetuity formulas, and other adjustments to arrive at intrinsic value</li> <li>Assignment 10 <ul style="list-style-type: none"> <li>P10-1: Essay questions on the DCF and residual income models</li> <li>P10-2: Calculations using perpetuity formulas and TVM</li> <li>P10-3: Calculating cash distributions and residual income</li> <li>P10-4: Implementing the DCF and residual income models</li> <li>P10-5: Examining accounting manipulation and the DCF and residual income models</li> </ul> </li> <li>Review Assignment 10 in class with high student interaction</li> <li>Practice problems PP2-4 (perpetuity formulas), PP2-5 (cash distributions and residual income), PP2-6 (DCF and residual income models), and PP2-7 (accounting manipulations)</li> <li>Doyle Study Guide distributed, summarizing main points of emphasis</li> <li>In-class study session for Final Exam</li> </ul>	<p><u>Assessment Methods</u></p> <ul style="list-style-type: none"> <li>Final Exam: 2 short problems (A9, A10)</li> <li>Final Exam: 1 long problem (B1)</li> <li>Final Project: students were required to use both a DCF and a residual income model to calculate intrinsic value</li> </ul> <p><u>Performance</u></p> <ul style="list-style-type: none"> <li>15.6% of all test points</li> <li>83.8% correct on test questions</li> <li>Final project overall average score of 91.9%</li> <li>Students scored below 80% on A10 (75.0%): MC conceptual problem on DCF vs. residual income models, B1b (73.7%) and B1d (76.0%): longer calculation of intrinsic value with DCF and residual income models</li> </ul> <p><u>Comments</u></p> <ul style="list-style-type: none"> <li>Performance on long problem was bimodal – some students did very poorly on this implementation</li> <li>Students grasped the concepts better than I expected – it’s very complicated, conceptual stuff, but I thought they followed it pretty well</li> </ul>

**Learning Objective 8: Students will understand valuation ratios and be able to use them in a comparable market analysis and in trading strategies**

Specific Learning Activities	Specific Assessment and Performance
<ul style="list-style-type: none"> <li>Read Chapter 11, “Valuation Ratios,” from textbook</li> <li>Skim valuation research papers: Sloan (1996), Doyle, Lundholm, and Soliman (2003), Piotroski (2000), Doyle, Lundholm, and Soliman (2006), and Frankel and Lee (1998)</li> <li>3 class periods with discussion of the definition of valuation ratios, the derivation of M/B and P/E from the residual income framework, the evolution of these ratios across time, value vs. glamour stocks, trading strategies, and back testing</li> <li>Assignment 11</li> </ul>	<p><u>Assessment Methods</u></p> <ul style="list-style-type: none"> <li>Final Exam: 6 short problems (A7, A8, A12, A13, A14, A15)</li> <li>Final Exam: 1 long problem (B2)</li> <li>Final Project: students were encouraged to use comparable analysis with valuation ratios as an alternative valuation</li> </ul> <p><u>Performance</u></p> <ul style="list-style-type: none"> <li>16.2% of all test points</li> <li>81.6% correct on test questions</li> <li>Final project overall average score of 91.9%</li> </ul>

<ul style="list-style-type: none"> <li>○ P11-1: Essay questions valuation ratios and comparable analysis</li> <li>○ P11-2: Derivation of M/B and P/E ratios</li> <li>○ P11-3: Comparable analysis using Johnson &amp; Johnson</li> <li>• Assignment 12 <ul style="list-style-type: none"> <li>○ P12-4: Essay questions on trading strategy papers</li> <li>○ P12-5: Essay questions on the implementation of a trading strategy</li> </ul> </li> <li>• Review Assignments 11 and 12 in class with high student interaction</li> <li>• Practice problem PP2-8 (residual model and ratios) and PP2-9 (comparable analysis using multiples)</li> <li>• Doyle Study Guide distributed, summarizing main points of emphasis</li> <li>• In-class study session for Final Exam</li> </ul>	<ul style="list-style-type: none"> <li>• Students scored below 80% on A7 (71.9%): MC conceptual problem on valuation ratio theory, A8 (53.1%): MC on valuation ratio trends, A12 (65.6%): short calculation on M/B ratio drivers, A14 (69.8%): short answer on trading strategy back testing</li> </ul> <p><u>Comments</u></p> <ul style="list-style-type: none"> <li>• Students were a bit weak conceptually on the valuation ratios, but performed well on the long problem calculations for comparable analysis</li> <li>• Not many students did this alternative valuation on the final project – I probably should require it next year</li> </ul>
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**Table 2a: Mapping of Test Questions to Learning Objectives**

Specific Problem	Learning Objective	Points Correct	Points Possible	Pct% Correct
M-A1	1	192.0	192.0	100.0%
M-A2	1	186.0	192.0	96.9%
M-A3	1	375.0	384.0	97.7%
M-A4	1	267.0	288.0	92.7%
M-A5	3	190.5	192.0	99.2%
M-A6	2	273.0	288.0	94.8%
M-A7	2	132.0	192.0	68.8%
M-A8	2	126.0	192.0	65.6%
M-A9	4	186.0	192.0	96.9%
M-A10	4	186.0	192.0	96.9%
M-A11	5	550.5	768.0	71.7%
M-A12	4	162.0	192.0	84.4%
M-A13	1	172.5	192.0	89.8%
M-A14	1	96.0	96.0	100.0%
M-A15	5	100.5	192.0	52.3%
M-A16	4	180.0	192.0	93.8%
M-A17	3	189.0	192.0	98.4%
M-A18	5	36.0	192.0	18.8%
M-A19	3	144.0	192.0	75.0%
M-A20	3	180.0	192.0	93.8%
M-A21	2	189.0	192.0	98.4%
M-A22	2	144.0	192.0	75.0%
M-B1a	3	541.5	576.0	94.0%
M-B1b	3	325.5	384.0	84.8%
M-B1c	4	535.5	576.0	93.0%
M-B2a	3	354.0	384.0	92.2%
M-B2b	3	712.5	768.0	92.8%
F-A1	5	171.5	224.0	76.6%
F-A2	5	367.5	448.0	82.0%
F-A3	6	273.0	336.0	81.3%
F-A4	9	658.0	672.0	97.9%
F-A5	9	220.5	336.0	65.6%
F-A6	6	294.0	336.0	87.5%
F-A7	8	241.5	336.0	71.9%
F-A8	8	178.5	336.0	53.1%
F-A9	7	273.0	336.0	81.3%
F-A10	7	252.0	336.0	75.0%
F-A11	6	248.5	336.0	74.0%
F-A12	8	220.5	336.0	65.6%
F-A13	8	546.0	560.0	97.5%
F-A14	8	234.5	336.0	69.8%
F-A15	8	320.3	336.0	95.3%
F-A16	6	306.3	336.0	91.1%
F-B1a	7	651.0	672.0	96.9%
F-B1b	7	495.3	672.0	73.7%
F-B1c	7	539.0	560.0	96.3%
F-B1d	7	511.0	672.0	76.0%
F-B2a	8	322.0	336.0	95.8%
F-B2b	8	290.5	336.0	86.5%
F-B2c	8	388.5	448.0	86.7%
F-B3a	5	182.0	224.0	81.3%
F-B3b	5	199.5	224.0	89.1%
F-B3c	5	206.5	224.0	92.2%
F-B4a	6	206.5	224.0	92.2%
F-B4b	6	182.0	224.0	81.3%
F-B4c	6	210.0	224.0	93.8%

**Table 2b: Summary of Exam Points by Learning Objective**

Learning Objective	Points Correct	Points Possible	Pct% Correct	Relative Weight
1	919.5	960.0	95.8%	4.6%
2	519.0	576.0	90.1%	2.8%
3	3,822.0	4,320.0	88.5%	20.8%
4	2,346.0	2,592.0	90.5%	12.5%
5	1,814.0	2,496.0	72.7%	12.0%
6	1,944.3	2,240.0	86.8%	10.8%
7	2,721.3	3,248.0	83.8%	15.6%
8	2,742.3	3,360.0	81.6%	16.2%
9	878.5	1,008.0	87.2%	4.8%