

Financial Reporting and Analysis of Technology Firms

Fall Semester 2012

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Course Materials:

Required: Course Notebook: *Financial Reporting and Analysis of Technology Firms*, by Prof. C. Mulford. Available from Honorary Accounting Organization. (Bring hard copy to class).

Available electronically on TSquare consisting of the following files:

- 1Intro1.Course Description
- 2Intro2.Supplemental Course Exercises

Tech Firm Accounting Lecture Notes

- 3AC1.Identifying Technology Firms
- 4AC2.Financial Reporting Topics Relevant for Technology Firms

Cash Flow Analysis Lecture Notes

- 5CF1.Cash Flow Construction for Technology Firms
- 6CF2.Cash Flow Analysis of Technology Firms

Financial Warnings Lecture Notes

- 7FW1.Financial Warnings Introduction
- 8FW2.Premature or Fictitious Revenue
- 9FW3.Aggressive Cost Capitalization and Extended Amortization Periods
- 10FW4.Misreported Assets and Liabilities
- 11FW5.Financial Fraud
- 12FW6.Creative Cash Flow Reporting and EQI

Valuation

- 13VL1.A Practical Approach to Corporate Valuation

Course Description

Financial Reporting and Analysis of Technology Firms focuses on financial reporting and analysis issues facing firms from a broad range of industries whose common bond is research and development of new technology, including the application of technology to new or enhanced products and services. The course is presented in three interrelated parts, each part seeks to fulfill one of three overall course objectives.

Part 1 clarifies the accounting and reporting standards that are particularly troublesome for technology firms. Standards that guide the reporting of activities of technology firms are sometimes arbitrary and are often misunderstood. For example, research and development is expensed as incurred unless aimed at the development of new software. Also, development stage enterprises are offered no special accounting guidelines from operating firms, though they do have special reporting requirements. Readers of the financial statements of technology firms must be aware of standards such as these to effectively understand the firms' underlying financial performance and position.

Part 2 is devoted to cash flow analysis. Technology firms in general are fast-growth entities. Many of these companies require external sources of cash to maintain their growth. Other firms, however, that are growing just as fast, are generators of cash and accumulate large amounts that can be used for new investment. Investment analysis is ultimately focused on a firm's ability to generate cash. This section is attentive to analyzing the traits of companies that permit some to generate cash while others consume it. The objective is to determine if and when companies that consume cash will begin to generate surpluses, and whether companies that generate cash currently will continue to do so.

In Part 3 attention turns to identifying financial warnings, available in the financial statements and notes, that can be useful in anticipating future declines in corporate earnings and cash flow. Such earnings declines might be caused by operational difficulties or by the application of creative accounting practices. The circumstances surrounding these performance declines have many names, such as "Asset write-offs", "unrecorded liabilities", "restructuring charges", "accounting irregularities", "inflated profits", and "earnings restatements". Each of these circumstances is often unanticipated. The objective of this section is to prepare the financial-statement reader to better anticipate and avoid them. Part 3 addresses earnings forecasts and valuation. The objective here is to anticipate developing trends in earnings and cash flow and formulate expectations for near-term results and longer-term growth with a focus on establishing a fundamental per-share valuation.

Course Procedure

A blending of lecture and discussion will typify the class sessions. A consistently high level of preparation for class sessions will be essential in order to derive maximum benefit from the course.

Grade Determination

Test 1: Accounting for technology firms	15%
Test 2: Cash flow construction and analysis	25%
Test 3: Financial Warnings and valuation, assigned final exam date	35%
Case Exercise (not a group exercise) – company valuation and financial warnings using EQI, due Dec 5 (Refer to supplemental exercises (front of notebook), page 26.	10%
Classroom participation (1 pt lost for 2 unexcused absences, 1 pt lost for failure to complete HW, any number of pts can be gained for insightful, course-related, in-class comments.	15%

The case exercise requires identification of a firm from a technology-related industry. Representative industries include:

- Aerospace
- Biotechnology
- Computers and peripherals
- Computer Software and Services
- Drugs
- Electronics
- Medical Supplies
- Precision Instrument
- Semiconductor
- Semiconductor Capital Equipment
- Telecommunications Equipment

Consistent with the college's honor code, students must do their own work on the exam and cases.

For students with disabilities: to request classroom accommodations, contact the ADAPTS office: Assistant Dean/Coordinator for Students with Disabilities, Smithgall Student Services Building, Suite 221, (404) 894-2564.

Financial Reporting and Analysis of Technology Firms

Course Outline

Session

Notebook page

Mon. Aug. 20

Course Introduction

Identifying Technology Firms

AC1. Identifying Technology Firms, pp. 1-14

In-class:

- Use of technology in providing goods and services
 - Not a good indicator
- Using financial statement characteristics to identify technology firms
 - Percentage of assets that are technology-based
 - High level of research and development activity, patents are a minor portion of total assets - **Biogen**
 - Capitalized software development costs - **AST International, Inc.**
 - Portion of employees engaged in scientific research activities
 - Personnel mix - **Groundwater Technology**
 - Research and development expenditures as a percentage of revenues
 - A workable approach for identifying technology firms
 - Research and development expense as a percentage of revenues for eight industry groups
 - Three industries that do not meet this technology firm definition
 - Broadcasting, including cable television
 - Environmental
 - Telecommunications services, including cellular phones

Wed. Aug. 22

Notebook page

Issues of Accounting and Financial Reporting

In-class:

- Development stage enterprises AC2.Financial Reporting, pp. 1-13
- Definition
- Accounting and reporting requirements
- A Development stage enterprise – **WaveCor., Inc.**
- Accounting for research and development costs AC2.Financial Reporting, pp. 14-26
 - Definition
 - Examples
 - Reporting guidelines
 - Costs incurred internally
 - Purchased from others
 - Research and development arrangements
 - What is research and development? - **St. Jude Medical**
 - Purchased research and development
 - **Cisco Systems, Inc.**
 - **MCIWorldCom**
 - Research and development arrangements
 - **Hi-Tech Pharmacal Co., Inc.**
- **In-class exercise - R&D or what?** AC2.Financial Reporting, p. 26

Mon. Aug 27

Issues of Accounting and Financial Reporting (cont'd)

In-class:

- Accounting for computer software costs AC2.Financial Reporting, pp. 27-43
- Key issue - sufficiently similar to research and development?
- Software purchased or created for internal use
- Software purchased or created for sale or lease
- The life cycle of software development
 - Accounting for software development costs
 - Importance of technological feasibility
 - Accounting and disclosure requirements
- Capitalized software development costs
 - **AST International, Inc.**
 - **National Software, Inc.**

- Accounting for software revenue recognition AC2.Financial Reporting, pp. 44-56
 - Statement of Position 97-2
 - Basic Principles
 - **Computer Associates International**
 - Four requirements for recognition
 - Evidence of an arrangement
 - Delivery
 - Fixed or determinable fees
 - Collectibility
 - Special situations
 - Multiple elements
 - PCS
 - Services
 - Contract accounting for software
 - Example policies
 - **Microsoft Corp.**
 - **IBM Corp.**
 - **Mustang Software**
 - **American Software**

Wed. Aug. 29

In-class:

- Compensation of Personnel AC2.Financial Reporting, pp. 57-72
- Characteristics of technology firms often limit cash compensation
- Alternatives employed
 - Stock options
 - Stock appreciation rights
 - Performance - type plans
- Reporting guidelines for stock-based compensation plans
 - Stock compensation plans
 - Qualified vs. nonqualified stock option plans
 - Qualified and nonqualified plans - **Autocomp**
 - Tax benefits from stock options
 - **IT Technologies**
- SFAS 123R - Accounting for stock-based compensation
- Stock appreciation rights and Performance-type plans

Mon. Sept 3
School Holiday

Wed. Sept. 5

Pre-class exercise:

Financial Reporting Issues for Technology Firms:
Skill Practice Exercise

Intro2.Supplemental exercises, pp. 3 - 12

In-class:

- Review Skill Practice Exercise

Mon. Sept. 10

Test 1: Accounting and reporting for technology firms

Wed. Sept. 12

Pre-class:

Forders, Inc. – Calculating core operating and operating cash flow:

CF1.Cash Flow Construction, p. 17-19

In-class:

Review Test 1 results

Cash Flow Construction

CF1.Cash Flow Construction, pp. 1-40

- Partitioning cash flows
 - **Star Therapeutics:**
 - Change in cash
 - Balance sheet changes
 - Indirect method
 - Direct method
 - **Storefront Furniture, Inc.**
 - Indirect and direct methods contrasted
- The Modified UCA format cash flow statement
 - **Barton Industries, Inc.** - calculating core operating and operating cash flow
 - Problem: **Forders, Inc.** - calculating core operating and operating cash flow
- The Modified UCA format cash flow statement
 - A statement format for cash flow analysis
 - **Column Casts** – Modified UCA format cash flow
 - Highlighting differences among the indirect method, direct method and Modified UCA format statements of cash flow
- Cash flow construction: A closer look at deriving the Modified UCA format cash flow statement
- Cash flow construction: A three step process

Mon. Sept. 17

Pre-class exercise:

Hamilton Farms, Inc.

CF1.Cash Flow Construction, pp. 33-35

Cash Flow Construction (cont'd)

In-class:

- Continue discussion of Modified UCA cash flow format
- Review solution to **Hamilton Farms, Inc.**

Wed. Sept. 19

Pre-class exercise:

Jewel's Jeweler's, Inc.

CF1.Cash Flow Construction, pp. 36-40

Cash Flow Construction (cont'd)

In-class:

- Continue discussion of UCA cash flow format
- Review solution to **Jewel's Jeweler's, Inc.**

Mon. Sept. 24

Cash Flow Analysis

CF2.Cash Flow Analysis, pp. 1-41

In-class:

- Using the analysis cash flow format to analyze cash flows
 - Four cases - same revenues, same net income, same net cash flow, very different conclusions
 - Some comments on the cash flow cases
 - A fifth case
- Using ratios to analyze cash flows
 - Growth
 - Profitability
 - Cost of goods sold percentage
 - Selling, general and administrative expense percentage
 - Operating efficiency
 - Days receivables
 - Days inventory
 - Days payables

Wed. Sept. 26

Pre-class exercise :

Review **Industrial Services, Inc.** (exclude tax accounts)

CF2.Cash Flow Analysis, pp. 14-27

Cash Flow Analysis (cont'd)

In-class:

- Using ratios to analyze cash flows (cont'd)
- **Industrial Services** (exclude tax accounts)

Mon. Oct. 1

The core operating growth profile and free cash growth profile

In-class:

- Complete review of **Industrial Services**
- A comparison of core operating growth profiles and free cash growth profiles, Industrial Services, Home Depot, Dell, and Microsoft.

Wed. Oct. 3

Pre-class exercise:

Problem: **Environmental Services** (excluding tax accounts) CF2.Cash Flow Analysis, pp. 36-41

Cash Flow Analysis (cont'd)

In-class:

- Review **Environmental Services**

Mon. Oct. 8

Pre-class exercise:

Skill Practice Exercise for Test 2

Intro2.Supplemental exercises, pp. 13-25

Wed. Oct. 10

Test 2: Cash Flow Analysis of Technology Firms

Mon. Oct. 15

School Holiday

Wed. Oct. 17

In-class:

- Review Test 2 results
- Discuss A Survey of Lenders assignment
- Begin discussion of “What’s an Earnings Surprise?”

Mon. Oct. 22

Introduction to Financial Warnings

Pre-class:

Complete: A Survey of Lenders - anticipating earnings surprises FW1.Introduction, p. 12

In-class:

- What's an earnings surprise? FW1.Introduction, p. 1-23
 - The Topps Co. - Provision for obsolescence and returns
 - MiniScribe - A massive fraud
 - Chambers Development - Abandoning unorthodox accounting
 - Home Nutritional Services - Changes in reimbursement patterns
 - Crown Crafts - Inventory theft loss
 - Presidential Life - Loss on investments
 - Lucent Technologies - Premature revenue recognition
 - Sunbeam Corp. - Premature revenue recognition
 - California Micro Devices - Fictitious revenue
 - Cascade International - Where's Our Chairman?
- How do earnings surprises impact future cash flows?
- Causative Factors for Earnings Surprises – Economic Fundamentals

Wed. Oct. 24

Introduction (cont'd)

Pre-class:

Complete: Financial Numbers Game Questionnaire FW.Introduction, p. 27

In-class:

- Causative Factors for Earnings Surprises (cont'd) FW1.Introduction, pp. 17-23
- Review Financial Numbers Game Questionnaire

Mon. Oct. 29

Premature or Fictitious Revenue

Pre-class:

Complete: Trading Cards, Inc (Topps). FW2.Revenue, pp. 17-21

In-class

- When should revenue be recognized? FW2.Revenue, pp. 2-14
 - Autodesk - Sales to distributors
 - BMC Software - Licensing of software
 - Computer Associates - Product license fees
 - Group 1 Software - Licenses of software
- Guidelines for revenue recognition
 - SEC requirements for revenue recognition
- Persuasive evidence of an arrangement

- • Perceptive BioSystems - Consignments
 - • Digital Lightwave - No P.O.
 - Delivery has occurred
 - • American Software - Shipment of user manuals
 - • Cylink - Shipments to a warehouse
 - • Informix - Side letters
 - Fixed or determinable fee
 - • Informix - Extended payment terms`
 - Collectibility is probable
 - • Informix - Disregarding customer creditworthiness
 - Change in revenue recognition practice to conform to new guidelines
 - • American Software - Recognition awaits shipment
 - Gain on sale: Should it be recognized?
 - • Comcast and Adelphia
 - Gain on sale: Curious presentation: IBM
- Review solution to **Trading Cards, Inc.**

Wed. Oct. 31

Premature or Fictitious Revenue (cont'd)

Pre-class: Complete: Disk Drive Corp (Miniscribe).
Complete Global Resources

FW2.Revenue, pp. 32-35
FW2.Revenue, pp. 36-39

In-class:

- Revenue recognition - premature or fictitious? FW2.Revenue, p. 25-31
 - • Boston Scientific - Sales to nonexistent customers
 - • California Micro Devices - "What's Wevenue?"
 - • Flight Transportation - Insufficient capacity
- Revenue recognition cover-up activities
- Special terminology - Premature or fictitious revenue FW2.Revenue, pp. 40-42
 - • Sunbeam - Bill and hold
 - • Bausch & Lomb - Channel stuffing
 - • Knowledgeware and others - Side letters
- • Financial warnings checklist FW2.Revenue, pp. 43-44
- Review solutions to **Disk Drive Corp.**
- Review solution to **Global Resources**

Mon. Nov. 5

Aggressive Cost Capitalization

Pre-class:

Complete: Cendant / CUC International - capitalized costs FW3.Cost Capitalization, p. 16-19

Complete: American Software –
capitalizing software development costs FW3.Cost Capitalization, pp. 28-29

Complete: Capitalized costs FW3.Cost Capitalization, pp. 13

In-class:

- The HealthSouth story FW3.Cost Capitalization, pp. 2-3
 - Expense or Capitalize?
 - The Good Guys - Store preopening costs
 - Sun Television & Appliances - Store preopening costs
 - Lechters - Store preopening costs
 - Value Merchants - A company changes its policies
 - Guidelines for expense recognition
 - O.I. Corporation - Warranty expense
 - Top Air Manufacturing - Amortization of patents
 - Dynatech - Improvements and R & D
 - Advertising expenditures - Can it be capitalized?
 - CPI Corp. - Direct response advertising
 - AOL - Direct response advertising
 - How do I recognize aggressive cost capitalization?
 - Legal Services, Inc. - Capitalized sales commissions
 - Medical Disposal Technologies –
A host of capitalized costs
 - Chambers Development –
In hindsight, capitalization was a mistake
 - Computer software development costs –
a special form of R & D
 - Capitalizing software development costs
 - Microsoft - No capitalization
 - System Software –
capitalizing software development costs
 - Disconnected: Inside Worldcom's Scandal
-
- Review solution to Cendant/CUC International
 - Review solution to American Software
 - Review solution to Capitalized Costs

Wed. Nov. 7

Extended Amortization Periods

Pre-class:

Read:	Goodwill Impairment: AOL TimeWarner	FW3.Cost Capitalization, p. 47-49
Complete:	Micron Technology	FW3.Cost Capitalization, p. 45
Complete:	American Software	FW3.Cost Capitalization, p. 46

In-class:

- Guidelines for choosing an amortization period FW3.Cost Capitalization, pp. 34-44
 - Bausch & Lomb - Depreciation policy
 - Cordis Corp. - Depreciation policy
 - Surgical Corp. - Depreciation policy
- Impact of amortization periods on pretax results
 - Surgical Corp. - amortization periods
- Differences in the selection of amortization periods - capitalized software development costs
 - Bolt Beranek and Newman –
Amortization period for software costs
 - Autodesk - Amortization period for software costs
 - BMC Software –
Amortization period for software costs
- Brazen steps taken to boost earnings through extended amortization
Livent - Amortizing capitalized preproduction costs
- What's an extended amortization period?
 - Snax, Inc. - Writedown of overvalued assets
- New rules for goodwill
 - American Standard Co. –
Evaluating goodwill for impairment
- Goodwill impairment: AOL TimeWarner
- Financial warnings checklist FW3.Cost Capitalization, p. 51-54

- Review solution to Micron Technology
- Review solution to American Software

Creative Cash Flow Reporting (Topics limited to key items) FW6.Creative Cash Flow, pp. 6-86

Use Cash Flow Classification exercise on p. 6 and 7 as introduction to each creative cash flow reporting topic.

In-class:

- | | |
|---------------------------------|-----------------------------------|
| • Investing activities | FW6.Creative Cash Flow, pp. 14-47 |
| • Financing activities | FW6.Creative Cash Flow, pp. 48-72 |
| • Taxes and operating cash flow | FW6.Creative Cash Flow, pp. 73-86 |

Mon. Nov. 12

Creative Cash Flow Reporting (cont'd) (Topics limited)

FW6.Creative Cash Flow, pp. 6-86

Pre-class:

Complete free cash flow exercise: Care Therapeutics, Inc. FW6.Creative Cash Flow, pp. 10-13.

In-class:

- Investing activities FW6.Creative Cash Flow, pp. 14-47
- Financing activities FW6.Creative Cash Flow, pp. 48-72
- Taxes and operating cash flow FW6.Creative Cash Flow, pp. 73-86

Review solution to Care Therapeutics, Inc.

Wed. Nov. 14

Using Operating Cash Flow to Detect Creative Accounting Practices

Pre-class:

Read: A Practical Approach to Corporate Valuation

VL1.Valuation, pp. 1-10

In-class:

- Earnings Quality Indicator FW6.Creative Cash Flow, pp. 87-101
 - Stable EQI: Anheuser Busch
 - Increasing EQI: Toys R Us
 - Declining EQI: Target
 - EQI Surfaces problems: Krispy Kreme
 - EQI Surfaces problems: Xerox
- EQI Surfaces problems: Enron
 - Trends in EQI

A Practical Approach to Corporate Valuation

VL1.Valuation, pp. 1-10

In-class:

- A Practical Approach to Corporate Valuation VL1.Valuation, pp. 1-10

Mon. Nov. 19

A Practical Approach to Corporate Valuation

VL1.Valuation, pp. 1-10

Pre-class:

Read: A Practical Approach to Corporate Valuation

VL1.Valuation, pp. 1-10

In-class:

- A Practical Approach to Corporate Valuation VL1.Valuation, pp. 1-10

Wed. Nov. 21

A Practical Approach to Corporate Valuation (cont'd)

Mon. Nov. 26

A Practical Approach to Corporate Valuation (cont'd)

VL1.Valuation, pp. 1-10

Pre-class:

Read: A Practical Approach to Corporate Valuation

VL1.Valuation, pp. 1-10

In-class:

- A Practical Approach to Corporate Valuation

VL1.Valuation, pp. 1- 10

Wed. Nov. 28

A Practical Approach to Corporate Valuation (cont'd)

VL1.Valuation, pp. 1-10

Pre-class:

Read: A Practical Approach to Corporate Valuation

VL1.Valuation, pp. 1-10

In-class:

- A Practical Approach to Corporate Valuation

VL1.Valuation, pp. 1- 10

Mon. Dec. 3

Misreported Assets and Liabilities

Complete: Comptronix - a complex fraud

FW4.Misreported Assets, p. 10

In-class:

- Inventory - a convenient fiction FW4.Misreported Assets, p. 2-9
- On the wild side - inventory reporting violations
 - Bre-X Minerals - "salted" gold samples
 - Centennial Technologies - fake inventory
- Lifo liquidations - a temporary earnings boost FW4.Misreported Assets, pp. 13-26
 - Cross Co. - lifo liquidations
- Other inventory issues
 - Topton Manufacturing – Changing inventory mix, a precursor of falling sales?
 - Crown Crafts – Inventory theft and the unexpected inventory writedown
- Investments - available for sale, trading and held to maturity FW4.Misreported Assets, pp. 27-31
 - SunTrust Banks – A major balance sheet boost to assets and equity
 - Presidential Life - What are debt securities worth?
- Review solution to **Comptronix**

Wed. Dec. 5

Turn in assignment: **Case Exercise Valuation and EQI.**

Intro2.Supplement, p. 31

Pre-class: Complete: Moore's Pool Supplies

Intro2.Supplement, pp. 27-30

In-class:

Undervaluation of Liabilities

- When are liabilities undervalued? FW4.Misreported Liab., pp. 32-54
- Accounts payable and accrued liabilities
 - Disk Drive Corp. - underaccrued warranty liability
- Low effective tax rate
 - Resource Engineering – net operating loss carryforwards
- Contingent liabilities
 - Lee Pharmaceuticals – failure to accrue for environmental damage
- Hidden obligations
 - Personal Diagnostics - open futures positions
 - Bay Tact Corp. - stocks on margin
- Off balance sheet liabilities - commitments
- Off balance sheet liabilities – Special Purpose Entities (SPEs)
 - Dell-CIT venture
- Off balance sheet liabilities - Synthetic leases
 - Cisco Systems - Synthetic leases and restricted cash
- Financial warnings checklist FW4.Misreported Liabs., pp. 53-57

Review solution to Moore's Pool Supplies

Review for Test 3

Final Exam Date – Test 3 Financial Warnings and Valuation