



Financial Statement Analysis

Financial Statement Analysis

Chapter 1

Framework for financial statement analysis

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01 Introduction

Aim of the Course 1

- To develop techniques for evaluating firms using financial statement analysis for acquisition, equity and credit analysis.
- Integrates financial statement analysis with corporate finance, accounting and fundamental analysis
- Adopts activist point of view to investing: the market may be inefficient and the statements may not tell all the truth
- Exploits accounting as a system for measuring value added
- Discovers good (and bad) accounting from a valuation perspective

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"Being an accountant gives him that extra aura of danger."

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What Will You Learn From the Course

- How financial statements are generated
- The role of financial statements in determining firms' values
- How to pull apart the financial statements to get at the relevant information
- How ratio analysis aids in valuation
- The relevance of cash flow and accrual accounting information
- How to calculate what the P/E ratio should be ?
- How to calculate what the price-to-book ratio ?

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"New from accounting, sir. Two and two is four again."

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Need for financial statement analysis

US GAAP – Complex
 Economic events about the firm to be reported to the public
 Relevance vs Reliability
 Reporting: Recognition vs Disclosure (where)

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Users of Firms' Financial Information

Equity Investors

Investment analysis
 Long term earnings power
 Management performance evaluation
 Ability to pay dividend
 Risk – especially market

Debt Investors

Short term liquidity
 Probability of default
 Long term asset protection
 Covenant violations

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Users of Firms' Financial Information

- Management: Strategic planning; Investment in operations; Performance Evaluation
- Litigants - Disputes over value in the firm
- Customers - Security of supply
- Governments: Policy making and Regulation
 Taxation
 Government contracting
- Employees: Security and remuneration

Investors and management are the primary users of financial statements

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Principles of Measurement

Accrual Accounting is not ____
 Matching Principle
 Historical Cost
 Going Concern Assumption

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The US Financial Reporting System

SEC: <http://www.sec.gov/>

- Mandates filing of information: 10-K the main one

FASB: <http://www.fasb.org/>

- SEC approves it; AICPA considers them authoritative
 - 150 standards; Interpretations
 - Conceptual framework
 Relevance vs reliability vs timeliness

IASB <http://www.iasc.org.uk/>

Public Company Accounting Oversight Board (2003)
<http://www.pcaobus.org/>

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FASB Amends Transition Guidance

NEWS RELEASE 12/31/02

FASB Amends Transition Guidance for Stock Options and Provides Improved Disclosures

Norwalk, CT, December 31, 2002—The FASB has published Statement No. 148, *Accounting for Stock-Based Compensation—Transition and Disclosure*, which amends FASB Statement No. 123, *Accounting for Stock-Based Compensation*. In response to a growing number of companies announcing plans to record expenses for the fair value of stock options, Statement 148 provides alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation.

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Consolidation of Variable Interest Entities

FASB Interpretation 46

A draft of the final guidance on FASB Interpretation 46, *Consolidation of Variable Interest Entities*, is being reviewed by the FASB staff, the Board, and a group of persons outside the FASB.

This draft uses the term Variable Interest Entities (VIE) rather than Special-Purpose Entities as was used in the June 2002 Exposure Draft to simplify the application of the guidance.

An entity shall be subject to consolidation according to the provisions of this Interpretation if, by design, either of the following conditions exists:

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The US Financial Reporting System 2

Foreign registrants in the US: easier 20-F form (like 10-K)

US Registrants: Four statements

- » Balance Sheet
- » Income Statement
- » Cash flow Statement
- » Statement of Stockholders' Equity

Comprehensive Income

"All changes in equity ... except those resulting from investments from owners and distributions to owners."
- different from Net Income

Footnotes; Contingencies.

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Auditors

Every US publicly traded firm must be audited - **SEC** says so (with congressional authority) and Sarbanes-Oxley Bill (2002)

What is the motivation of **auditors** ? (Big four)
CPA's must follow US GAAP (AICPA says so)
SEC has said FASB sets US GAAP

Conflicts with **Management**

Role of **Board of Directors**

Role of Wall Street **Analysts and Banks**

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ANDREW S. FASTOW - ENRON CORP.

CFO Excellence Award for Capital Structure Management
Category: CAPITAL STRUCTURE MANAGEMENT
How Enron financed its amazing transformation from pipelines to piping hot.
Russ Banham, CFO Magazine
October 01, 1999



<http://accounting.cba.uic.edu/Articles/Humor/>

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Approaches to investing

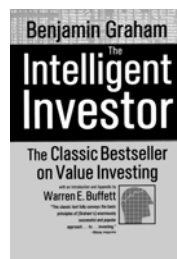
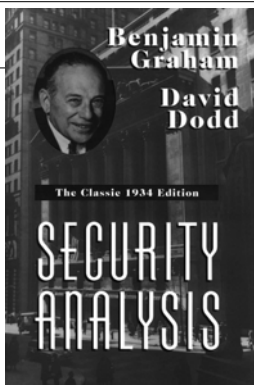
- intuitive approach:
 - Self deception; ignores ability to check intuition
- passive approach:
 - Price is what you pay, value is what you get
- screening
 - Ignores information about the future

Fundamental analysis Requires work !

- defense against paying the wrong price (or selling at the wrong price)
- an opportunity to find mispriced investments

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Fundamental Analysis



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Fundamental Analysis

Step 1 - Knowing the Business

The Products; The Knowledge Base
The Competition' The Regulatory Constraints

Step 2 - Analyzing Information

In Financial Statements
Outside of Financial Statements

Step 3 - Forecasting Payoffs

Measuring Value Added
Forecasting Value Added

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Fundamental Analysis 2

Step 4 - Convert Forecasts to a Valuation

Step 5 - Trading on the Valuation

Outside Investor: Compare Value with Price to BUY, SELL, or HOLD

Inside Investor: Compare Value with Cost to ACCEPT or REJECT Strategy

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Questions Fundamental Investors Ask

- Dell Computer traded at 76 times earnings (in 1998). Historically, P/E ratios have averaged about 12. Is Dell's P/E ratio too high?
- What growth in earnings is required to justify a P/E of 76?
- Yahoo! had a market capitalization of \$92 billion (in 1999). What future sales and profits does this imply?
- Coca-Cola had a price-to-book ratio of 17 (in 1999). Why is its market value so much more than its book value?
- How are business plans and strategies translated into a valuation?

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Fundamental Analysis 3

- A valuation model guides the process
- Forecasting is at the heart of the process and a valuation model specifies what is to be forecasted (Step 3) and how a forecast is converted to a valuation (Step 4). What is to be forecasted (Step 3) dictates the information analysis (Step 2)

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A (Too) Simple Valuation Model: Converting a Forecast to a Valuation

$$\text{Value} = \frac{\text{Forecasted Earnings}}{\text{Required Return}}$$

Value of a \$100 savings account bearing 5% interest:

$$\text{Value} = \$5.00 / 0.05 = \$100.00 \text{ (It works!)}$$

Value of Dell with forecasted earnings of \$1.43 per share and 12% required return

$$\text{Value} = \$1.43 / 0.12 = \$11.92 \text{ per share}$$

Is this the correct model?

Should earnings or something else be forecasted?

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Reverse Engineering: Converting a Price to a Forecast

Dell trades at \$66 per share. What forecast of earnings is implied?

$$\text{Value} = \frac{\text{Forecasted Earnings}}{\text{Required Return}}$$

So, Forecasted earnings from market price

$$= \text{Price} \times \text{Required Return}$$

$$= \$66 \times 0.12 = \$7.92 \text{ per share}$$

Are we using a sound model?

Or is the market price incorrect?

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