Chapter 7

Financial Statement Analysis: Connecting Economic Concepts to Accounting Reports

Chapter Overview

This chapter completes the bridge from learning the parts of the annual report (in particular the financial statements) that was covered in Chapters 1 through 5 with the discussion of economic concepts that began in Chapter 6.

Chapter Overview (continued)

Recall from Chapter 1 that the financial statements are "filtered" by accounting conventions. When an entity's accounts (i.e., its book values) closely reflect economic values, the "filter" creates little, if any, variance between economic and financial (GAAP) values.

Chapter Overview (continued)

- When book value and economic value are similar, the financial statements present a "clear picture" of the entity.
- When an entity's book value does not closely mirror economic values, the "filter" results in a variance between the two values. When this occurs, there is a "cloudy picture" of the flows of economic resources over a period of time.

Chapter Overview (continued)

The key to understanding a set of financial statements is knowing whether the statements present a clear or cloudy picture of the entity. Obviously, as the clouds get thicker you will have to work harder at understanding what is going on (e.g., Enron).

The Stock Market Price As An Estimate of a Firm's Economic Value

What is the total economic value of a company?

The total economic value of a firm is referred to as its market capitalization. It equals the total number of common shares of stock outstanding times the current market price per share.

How is the Market Price of a Stock Determined?

- The market processes information about the entity's future cash flows and then forms an expectation about what these cash flows will be. The annual report is an important source of this information.
- It is important to note that the stock price (i.e., market valuation), is done in the "aggregate" and is not an estimate of each "individual" asset and liability of the entity.

Strengths and Weaknesses of Accounting Valuations

Strengths

- GAAP financial statements are objective and verifiable.
- GAAP has a conservative bias (i.e., it discloses the economic effects of "bad events" immediately and waits until "good events" actually occur).

Strengths and Weaknesses of Accounting Valuations

Weakness

- GAAP reports historical events, while most decision-making looks to future events.
- The rigidity of GAAP statements does not lend itself to the economic structure variations that exist in firms and industries. NOTE: Some might view this as a strength, since it provides a conservative approach to firm value (e.g., ENRON)

Differences Between GAAP Numbers and Economic Numbers

Restrictive Recognition – Income is only reported when a service takes place or an expense is incurred. As a result, a competitive advantage attained through an employment contract is not shown in the financial statements until work is actually performed. However, such a contract might be an important consideration in projecting an entity's future cash flows.

Differences Between GAAP Numbers and Economic Numbers

Book Valuation – Long-term asset (e.g., a building) valuation is based upon allocating the initial cost of the asset over its projected useful life. This accounting convention assures a "matching" of expense with the period in which revenue is earned, but accomplishes little in terms of disclosing the economic value of the asset.

Determining Whether We Have a Clear or Cloudy Picture

Recall the Accounting Identity:

Assets = Liabilities + Stockholders' Equity

An entity's book value is equal to its net Worth, which can be represented as:

Assets - Liabilities = Net Worth

therefore,

Book Value = Stockholders' Equity

Determining Whether We Have a Clear or Cloudy Picture

We have a clear picture when a company's market capitalization (market price per share times the number of shares outstanding) equals book value. Thus to standardize this relationship, we measure the relationship of market capitalization to book value. The closer this ratio is to 1 the clearer the picture. The larger the number the cloudier the picture.

Determining Whether We Have a Clear or Cloudy Picture

Once we establish whether or not there is a significant difference between the market capitalization of the entity, and the book value of the entity we should go back through the financial statements section by section to try and explain the difference. We do this by using the information provided in the financial statements and the notes to the financials.

A Conceptual Basis for Financial Statement Analysis

Accounting Balance Sheet (BvA1)

Recognized assets with valuations very close to their economic values.

Economic Balance Sheet (EvA1)

The economic value of these assets is equal to their book value.

Examples

Cash, accounts receivable and marketable securities.

A Conceptual Basis for Financial Statement Analysis

Accounting Balance Sheet (BvL1)

Recognized liabilities with valuations very close to their economic values.

Economic Balance Sheet (EvL1)

The economic value of these obligations is equal to their book value.

Examples

Accounts payable and short-term debt.

A Conceptual Basis for Financial Statement Analysis

Accounting Balance Sheet (BvA2)

Recognized assets with known economic values different from accounting values.

Economic Balance Sheet (EvA2)

The economic value of these assets is likely greater than their book value.

Examples

Inventory and some property or equipment (e.g., automobile).

A Conceptual Basis for Financial Statement Analysis

Accounting Balance Sheet (BvL2)

Recognized liabilities with known economic values different from accounting values.

Economic Balance Sheet (EvL2)

The economic value of these obligations may be greater or less than their book value.

Examples

Some types of long-term debt.

A Conceptual Basis for Financial Statement Analysis

Accounting Balance Sheet (BvA3)

Recognized assets for which it is difficult to obtain economic value.

Economic Balance Sheet (EvA3)

The economic value of these assets is likely greater than their book value.

Examples

Buildings and land.

A Conceptual Basis for Financial Statement Analysis

Accounting Balance Sheet (BvL3)

Recognized liabilities for which it is difficult to obtain economic value.

Economic Balance Sheet (EvL3)

The economic value of these assets is likely less than their book value.

Examples

Warranty liabilities.

A Conceptual Basis for Financial Statement Analysis

Accounting Balance Sheet (BvA4)

By definition the economic listed assets in the examples below are NOT recognized as assets in the financial statements.

Economic Balance Sheet (EvA4)

Unrecognized assets. Assets that have economic value but are not listed in the balance sheet.

Examples

Intellectual capital, human capital, valuable relationships.

A Conceptual Basis for Financial Statement Analysis

Accounting Balance Sheet (BvA4)

By definition the economic listed obligations in the examples below are NOT recognized as obligations in the financial statements.

Economic Balance Sheet (EvA4)

Unrecognized obligations. Obligations that have economic consequences but are not listed in the balance sheet.

Examples

Employment contracts, some leases and stock options.

A Conceptual Basis for Financial Statement Analysis

In summary, using the terms in the book we can express this relationship as follows:

(BvA1)+ (BvA2)+ (BvA3)+ (BvA4) - (BvL1) - (BvL2) (BvL3) - (BvL4) = BvE - Book Value of Equity

(EvA1)+ (EvA2)+ (EvA3)+ (EvA4) - (EvL1) - (EvL2) (EvL3) - (EvL4) = EvE – Economic Value of Equity

A Conceptual Basis for Financial Statement Analysis

Thus, the greater the difference between the Economic Value of Equity and the Book Value of Equity, the more subjective the valuation of an entity and the greater the likelihood that there might not be a consistent consensus on the stock price in the short-term (i.e., subject to market swings).

Ratios

Another way of looking at this relationship on an aggregate basis that does not delve in-depth into the causes of the differences between BvE and EvE is by comparing an entity's accounting rate of return ratios with its economic return on equity (also referred to as the annual return on investment). The accounting rate of return is a BvE measure, while the economic return on equity is an EvE measure.

Ratios

As with the ratio of market value to book value, if there is a significant difference between these two ratios, then the financial statements have probably failed to capture economic assets or liabilities.

Ratios

Accounting Return on Equity:

$$\frac{\text{Net income}}{\text{Stockholders' Equity}}$$

Economic Return on Equity:

$$\frac{(\text{Ending market price} + \text{dividends}) - \text{Beginning market price}}{\text{Beginning market price}}$$