

### Chapter 7 Financial Statement Analysis: Connecting Economic Concepts to Accounting Reports

#### Chapter Overview

Bridge from  
Parts of the annual report (financial statements)  
Economic concepts

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.  
- 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 a 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 Valuation

The total economic value of a firm i.e. market capitalization.  
= total number of common shares of stock outstanding  
x 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 these cash flows. The annual report is an important source of this information.

- » Stock price (i.e., market valuation), is done in the "aggregate"
- » Not an estimate of each "individual" asset and liability of the entity.

#### Accounting Valuations

##### Strengths

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

##### 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.

#### Differences Between GAAP Numbers and Economic Numbers

Restrictive Recognition –

Income is only reported when a service takes place or an expense is incurred.

e.g. 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.

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

### Clear or Cloudy Picture ?

Accounting Identity: Assets = Liabilities + Stockholders' Equity  
An entity's book value is equal to its net Worth,  
Book Value = Stockholders' Equity = Net Worth  
= Assets - Liabilities  
We have a clear picture when a company's  
market capitalization (market price per share times the number  
of shares outstanding)  
equals book value.

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.

### Clear or Cloudy Picture ? - 2

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.

### Basis for Financial Statement Analysis 1

Accounting Balance Sheet (BvA1)  
Assets with accounting valuations = economic values.  
Economic Balance Sheet (EvA1)  
Economic value of these assets = book value.  
Examples: Cash, accounts receivable and marketable securities.

Accounting Balance Sheet (BvL1)  
Liabilities with accounting valuations = economic values.  
Economic Balance Sheet (EvL1)  
Economic value of these obligations = book value.  
Examples: Accounts payable and short-term debt.

### Basis for Financial Statement Analysis 2

Accounting Balance Sheet (BvA2)  
Assets with accounting values <> known economic values  
Economic Balance Sheet (EvA2)  
Economic value of these assets is likely > book value.  
Examples: Inventory and some property or equipment (e.g.,  
automobile).

Accounting Balance Sheet (BvL2)  
Liabilities with accounting values <> known economic values  
Economic Balance Sheet (EvL2)  
Economic value of these obligations <> book value.  
Examples: Some types of long-term debt.

### Basis for Financial Statement Analysis 3

Accounting Balance Sheet (BvA3)  
Assets for which it is difficult to obtain economic value.  
Economic Balance Sheet (EvA3)  
Economic value of these assets is likely > book value.  
Examples: Buildings and land.

Accounting Balance Sheet (BvL3)  
Liabilities for which it is difficult to obtain economic value.  
Economic Balance Sheet (EvL3)  
Economic value of these assets is likely < book value.  
Examples: Warranty liabilities.

### Basis for Financial Statement Analysis 4

Accounting Balance Sheet (BvA4)  
NOT recognized as assets in the financial  
statements.  
Economic Balance Sheet (EvA4)  
Unrecognized assets. Assets that have economic  
value.  
Examples: Intellectual capital, human capital, valuable  
relationships.

Accounting Balance Sheet (BvL4)  
NOT recognized as obligations in the financial  
statements.  
Economic Balance Sheet (EvL4)

### Basis for Financial Statement Analysis 5

In summary, we can express this relationship as follows:

$$\begin{aligned} &BvA1 + BvA2 + BvA3 \\ &- BvL1 - BvL2 - BvL3 = BvE \quad \text{Book Value of Equity} \end{aligned}$$

$$\begin{aligned} &EvA1 + EvA2 + EvA3 + EvA4 \\ &- EvL1 - EvL2 - EvL3 - EvL4 = EvE \quad \text{Economic Value of Equity} \end{aligned}$$

Thus, the greater the difference between the Economic Value of Equity and the Book Value of Equity,

### 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 with its economic return on equity

Accounting Rate of Return = Return on Equity (ROE):  
= Net income / Stockholders' Equity  
is a BvE measure.

Economic Return on Equity = Market Return:  
(Ending market price + dividends - Beginning market price) / Beginning market price  
is an EvE measure.