

Suite 508**VALUATION OF FINANCIALS**

*A Technical Understanding
Understanding the Balance Sheet
Understanding Income Statements*

508.01 A TECHNICAL UNDERSTANDING

Investors are always looking for a better way to pick securities. Two types of data analysis have emerged to assist investors in making better investment decision. In this section, we will introduce you to fundamental and technical analysis.

- What is a Fundamental Analysis?
- What is a Technical Analysis?
- Which type of analysis is better for you?

What is a Fundamental Analysis?

Fundamental analysis is a method used to evaluate the worth of a security by studying the financial data of the issuer. It scrutinizes the issuer's income and expenses, assets and liabilities, management, and position in its industry. In other words, it focuses on the "basics" of the business.

If you want to use fundamentals to help you make an investment decision, you would rely heavily on an offering prospectus, annual and quarterly reports as well as any current news items relating to the issuer whose securities you are considering.

A technical analysis takes a different approach.**What is a Technical Analysis?**

Technical analysis is a method used to evaluate the worth of a security by studying market statistics. Unlike fundamental analysis, technical analysis disregards an issuer's financial statements. Instead, it relies upon market trends to ascertain investor sentiment to predict how a security will perform.

If you want to use technical analysis to help you make an investment decision, you will refer to financial charts, tables and ratios found in the financial press. You will look for market trends and averages to help you decide whether the "time is right" to make an investment.

Which Type of Analysis is Best for You?

Fundamentalists and technicians have been at odds with one another since the advent of investing. There is no clear answer as to which is right. Sometimes it appears that the technicians make better picks. Other times it seems the fundamentalists are making the right call. One thing is certain, when one group of analysis is wrong the other will surely emerge saying, "We told you so". So, which is right for you? There are many potential answers to that question. Three variants of popular answers are:

If you are a “long-term” investor looking for companies with solid foundation, growth and income potential, the fundamentals may sway you.

If you are a “short-term” investor (trader) looking for companies who are “on the verge” of being discovered, fundamentals will be useful to you.

If you are a “long-term” investor who is not as concerned about one company’s basics because you will diversify to minimize risk, or you are a “short-term” investor waiting for investor sentiment to change, then technical analysis will be helpful to you.

Today, many investors find both fundamental and technical analysis helpful in painting a more complete and colourful picture on the investment canvas. Whether you use an asset allocation, buy and hold, or market timing strategy, you will find useful information from both the fundamentalists and technicians. The technicians can tell you about the broad market and its trends. The fundamentalists tell you whether an issue has the “basics” necessary to meet your investment objectives.

Both fundamental and technical analysis methods differ radically in their approaches. Try using the best ideas from each camp and you should be pleased with the results.

508.02 UNDERSTANDING COMPANY EARNINGS

What Are Company Earnings?

You go into business to make money. Unless an organization is a not-for-profit enterprise, its goal is to make money for the owners. In order to make money, the business must have income to pay its employees, utility bills, costs of production and other operating expenses. If a company has cash left over after paying its expenses, it has earnings. Earnings are a company’s net profit.

The nature of a business defines how it makes earnings. Two sources of company earnings are income from sales of goods or services and income from investment. For example, a manufacturer produces goods for sale to its clients. A bank sells depository services to its clients. All businesses generate income by providing either goods or services to clients.

Another source of income is investment. Investments generate income for businesses and individuals from either interest on loans, dividends from other businesses, or gains on the sale of investment property.

Company earnings are the sum of income from sales or investment after paying its expenses. Sounds simple enough, but what does this have to do with you?

Why Are Earnings Important to You as an Investor?

If you invest in a company’s stock, you gain an undivided share of the company. Typically, when a company earns more money, shareholders do as well. So, company earnings are important to you because you make money when the

business you invest in makes money. When a company you own stock in has positive earnings, it benefits you in several ways.

- You may receive a portion of the earnings as a dividend.
- The company may reinvest earnings for future growth.
- The company may invest earnings to generate additional income.

In any case, earnings are important to you because they provide a company with capital to make money for you as an investor.

What Makes Up Corporate Earnings?

Income from sales and investments produce earnings.

Before a company can sell its product or service, it incurs expenses to produce them. These expenses may include cost of materials, labor, market research, marketing, sales and distribution and overhead. Before a company can show a profit, it must first settle the costs of doing business.

The way in which a business conducts its operations is an important element to understand when evaluating a company's earnings. Companies that are devoting significant resources to creating a new product may have relatively weak earnings now. But, if that new product catches on, profits could quickly rise and the earnings may begin to soar. Meanwhile, companies that have great earnings now, but are not investing any money to ensure that their business success will continue, may have significant problems in the future.

When evaluating corporate earnings you should not only look at the income sources, but the expenses as well. They can reveal the company's long-term strategy for making money, or uncover potential inefficiency or mismanagement.

Where Do You Find Corporate Earnings Information?

The best place to learn about company earnings is the corporate annual report. The annual report contains information on the company philosophy and its position in the marketplace. It also contains audited financial statements. These tell you all about the company's financial operations. You can obtain an annual report directly from the company's public relations department or on the Web (in the U.S.A. by searching the Securities and Exchange Commission's EDGAR database at www.sec.gov/edgarhp.htm).

To find information about the company's earnings, you should study the "income statement" and "balance sheet". The income statement shows the sources of a company's income, production costs and other expenses. The balance sheet shows the company's overall financial strength and potential for growth.

What will Earnings Information Tell You?

The "financials" will show you whether a company is oriented for income, growth, or a bit of both. You can get all of this information from the financials. But you must compare the financials for different companies in the same industry to see which has characteristics best suited to your investment goals.

A convenient way to compare companies is through earnings per share (EPS). EPS represents the net profit divided by the number of outstanding shares of stock.

When comparing earnings per share of several companies that are candidates for your investment dollars, here are a few things to consider:

- Companies with higher earnings are stronger than companies with lower earnings.
- Companies that reinvest their earnings may pay low or no dividends, but may be poised for growth.
- Companies with lower earnings, and higher research and development costs, may be on the brink of a breakthrough (or disaster).
- Companies with higher earnings, lower cost and lower shareholder equity, may be a target for a merger.

When comparing different companies' earnings you should ask yourself.

- Why are they different?
- Do the differences make sense for these companies?

UNDERSTANDING THE BALANCE SHEET

We will now look at some of the tools you can use in making an investment decision from balance sheet information.

Why you should analyze a Balance Sheet

The analysis of a balance sheet can identify potential liquidity problems. These may signify the company's inability to meet financial obligations. An investor could also spot the degree to which a company is leveraged, or indebted. An overly leveraged company may have difficulties raising future capital. Even more severe, they may be headed towards bankruptcy. These are just a few of the danger signs that can be detected with careful analysis of a balance sheet.

508.03 LIQUIDITY RATIOS

The following liquidity ratios are all designed to measure a company's ability to cover its short-term obligations. Companies will generally pay their interest payment and other short-term debts with current assets. Therefore, it is essential that a firm have an adequate surplus of current assets in order to meet their current liabilities. If a company has only illiquid assets, it may not be able to make payments on their debts. To measure a firm's ability to meet such short-term obligations, various ratios have been developed.

Here are the balance sheet ratios:

- Current Ratio
- Acid Test (or Quick Ratio)
- Working Capital
- Leverage

These tools will be invaluable in making wise investment decisions.

Current Ratio

The Current Ratio measures a firm's ability to pay their current obligations. The greater extent to which current assets exceed current liabilities, the easier a company can meet its short-term obligations.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

After calculating the Current Ratio for a company, you should compare it with other companies in the same industry. A ratio lower than that of the industry average suggests that the company may have liquidity problems. However, a significantly higher ratio may suggest that the company is not efficiently using its funds. A satisfactory Current Ratio for a company will be with close range of the industry average.

Acid Test or Quick Ratio

The Acid Test Ratio or Quick Ratio is very similar to the Current Ratio except for the fact that it excludes inventory. For this reason, it's also a more conservative ratio.

$$\text{Acid Test} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$$

Inventory is excluded in this ratio because, in many industries, inventory cannot be quickly converted to cash. If this is the case, inventory should not be included as an asset that can be used to pay off short-term obligations. Like the Current Ratio, to have an Acid Test Ratio within close range to the industry average is desirable.

508.04 WORKING CAPITAL

Working Capital is simply the amount that current assets exceed current liabilities. Here it is in the form of an equation.

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

This formula is very similar to the current ratio. The only difference is that it gives you a dollar amount rather than a ratio. It too is calculated to determine a firm's ability to pay its short-term obligations. Working Capital can be viewed as somewhat of a security blanket. The greater the amount of Working Capital, the more security an investor can have that they will be able to meet their financial obligations.

You have just learned about liquidity and the ratios used to measure this. Many times a company does not have enough liquidity. This is often the cause of being over leveraged.

Leverage

Leverage is a ratio that measures a company's capital structure. In other words, it measures how a company finances their assets. Do they rely strictly on equity? Or, do they use a combination of equity and debt? The answers to these questions are of great importance to investors.

$$\text{Leverage} = \frac{\text{Long-term Debt}}{\text{Total Equity}}$$

A firm that finances its assets with a high percentage of debt is risking bankruptcy should it be unable to make its debt payments. This may happen if the economy of the business does not perform as well as expected. A firm with a lower percentage of debt has a bigger safety cushion should times turn bad.

A related side effect of being highly leveraged is the unwillingness of lenders to provide more debt financing. In this case, a firm that finds itself in a jam may have to issue stock on unfavourable terms. All in all, being highly leveraged is generally viewed as being disadvantageous due to the increased risk of bankruptcy, higher borrowing costs, and decreased financial flexibility.

On the other hand, using debt financing has advantages. Stockholder's potential return on their investment is greater when a firm borrows more. Borrowing also has some tax advantages.

The optimal capital structure for a company you invest in depends on which type of investor you are. A bondholder would prefer a company with very little debt financing because of the lower risk inherent in this type of capital structure. A stockholder would probably opt for a higher percentage of debt than the bondholder in a firm's capital structure. Yet, a company that is highly leveraged is also very risky for a stockholder.

When a firm becomes over leveraged, bankruptcy can result.

508.05 BANKRUPTCY

Bankruptcy is a legal mechanism that allows creditors to assume control of a firm when it can no longer meet its financial obligations. Bankruptcy is a result feared by both stock and bond investors. Generally, the firm's assets are liquidated (sold) in order to pay off creditors to the extent that is possible. When

bankruptcy occurs, stockholders of a corporation can only lose the amount they have invested in the bankrupt company. This is called Limited Liability. The stockholders' liability to creditors is limited to the amount invested. Therefore, if a firm's liabilities exceed the liquidation value of their assets, creditors also stand to lose money on their investments.

When bankruptcy occurs, a federal court official steps in and handles the payments of assets to creditors. The remaining funds are always distributed to creditors in a certain pecking order:

1. Unpaid taxes to the IRS and bankruptcy court fees
2. Unpaid wages
3. Secured bondholders
4. General creditors and unsecured bonds
5. Subordinated debentures
6. Preferred Stockholders
7. Common Stockholders

Obviously, to hold secured bonds rather than unsecured bonds is more advantageous in the event of a bankruptcy. This is where you must examine your risk/reward requirements. As you move down this hierarchy, your risk of losing your investment increases. However, you are "rewarded" for taking more risk with potentially higher investment returns.

How do you predict bankruptcy? Well, no one can do it perfectly. However, one popular method called a Z-score (developed by Edward Altman) has a good track record. To learn more about "Z-scores" go to your local library. We will recap a few of the most important points about learning to analyze a company's balance sheet.

Tying it all Together

Analyzing a balance sheet is fundamental knowledge for anyone who wishes to carefully select solid and profitable investments. The balance sheet is the basic report of a firm's possessions, debts and capital. The composition of these three items will vary dramatically from firm to firm. As an investor, you need to know how to examine and compare balance sheets of different companies in order to select the investment that meets your needs.

UNDERSTANDING INCOME STATEMENTS

A company's income statement is a record of its earnings or losses for a given period. It shows all of the money a company earned (revenues) and all of the money a company spent (expenses) during this period. It also accounts for the effects of some basic accounting principles such as depreciation.

The income statement is important because it's the basic measuring stick of profitability. A company with little or no income has little or no money to pass on to its investors in the form of dividends. If a company continues to record losses for a sustained period, it could go bankrupt. In such a case, both bond and stock investors could lose some or all of their investment. On the other hand, a

company that realizes large profits will have more money to pass on to its investors.

Here is an Example of a basic Income Statement

The income statement shows revenues and expenditures for a specific period, usually the fiscal year. Income statements differ by how much information they provide and the style in which they provide the information. Here is an example of a hypothetical income statement, with the revenues in black and expenditures in red (and parentheses):

Wilma's Widgets Income Statements for the Years Ending 2004 and 2005

	2004	2005
Sales	\$900,000	\$990,000
<u>Less Cost of Goods Sold</u>	<u>(250,000)</u>	<u>(262,500)</u>
Gross Profit on Sales	650,000	727,600
Less General Operating Expenses	(120,000)	(127,500)
<u>Less Depreciation Expense</u>	<u>(30,000)</u>	<u>(30,000)</u>
Operating Income	500,000	570,000
<u>Other Income</u>	<u>50,000</u>	<u>30,000</u>
Earnings Before interest and Tax	550,000	600,000
Less Interest Expense	(30,000)	(30,000)
<u>Less Taxes</u>	<u>(50,000)</u>	<u>(54,500)</u>
Net Earnings (Available Earnings For Dividends)	470,000	515,500
Less Preferred and/or Common <u>Dividends Paid</u>	<u>(70,000)</u>	<u>(80,000)</u>
Retained Earnings	400,000	435,500

Now, as perplexing as those numbers might seem at first, you will become comfortable with them very quickly once we explain what all this financial jargon really means. Let us start by looking at the first term that was calculated – gross profit on sales.

508.06 GROSS PROFIT ON SALES

Gross profit on sales (also called gross margin) is the difference between all the revenue the company earns and the sales of its products minus the cost of what it took to produce them. Let us move on to clarify how to calculate this important number.

Gross Profit on Sales = Net Sales – Cost of Goods Sold

Simple, yes, but let's be sure we know what the terms sales and costs of goods sold means to the accountants.

Net sales are the total revenue generated from the sale of all the company's products or services minus an allowance for returns, rebates, etc. Sometimes on

an income statement, you might see the terms “gross sales” and “returns”, “rebates” or “allowances.” Gross sales are the total revenue generated from the company’s products or services before returns or rebates are deducted. Net sales on the other hand have all these expenses deducted.

Cost of goods sold is what the company spent to make the things it sold. Cost of goods sold includes the money the company spent to buy the raw materials needed to produce its products, the money it spent on manufacturing its products and labor costs.

When you subtract all the money a company spent in the production of its goods and services (cost of goods sold) from the money made from selling them (net sales), you have calculated their gross profit on sales.

Gross profit on sales is important because it reveals the profitability of a company’s core business. A company with a high gross profit has more money left over to pump into research and development of new products, a big marketing campaign, or better yet – to pass on to its investors. Investors should also monitor changes in gross profit percentages. These changes often indicate the causes of decreases or increases in a company’s profitability. For instance, a decrease in gross profit could be caused by an industry price war that has forced the company to sell its products at a lower price. Poor management of costs could also lead to a decreased gross profit.

508.07 OPERATING INCOME

Operating income is a company’s earnings from its core operations after it has deducted its costs of goods sold and its general operating expenses. Operating income does not include interest expenses or other financing costs. Nor does it include income generated outside the normal activities of the company, such as income on investments or foreign currency gains.

Operating income is particularly important because it is a measure of profitability based on a company’s operations. In other words, it assesses whether or not the foundation of a company is profitable it ignores income or losses outside of a company’s normal domain. It also excludes extraordinary events, such as lawsuits or natural disasters, which in a typical year would not affect the company’s bottom line.

An easy way to calculate operating income is as follows:

Operating Income = Gross profit – General Operating Expenses – Depreciation Expense

General operating expenses are normal expenses incurred in the day-to-day operation of running a business. Typical items in this category include sales or marketing expenses, salaries, rent, and research and development costs.

Depreciation is the gradual loss in value of equipment and other tangible assets over the course of its useful life. Accountants use depreciation to allocate the initial purchase price of a long-term asset to all of the periods for which the asset will be used.

508.08 EARNINGS BEFORE INTEREST AND TAXES

Earnings before interest and taxes is (EBIT) the sum of operating and non-operating income. This is typically referred to as “other income” and “extraordinary income” (or loss). As its name indicates, it is a firm’s income excluding interest expenses and income tax expenses. EBIT is calculated as follows:

EBIT = Operating Income + (-) Other Income (Loss) + (-) Extraordinary Income (Loss)

Since we already know what operating income is, let’s take a closer look at what other income and extraordinary income mean.

Other income generally refers to income generated outside the normal scope of a company’s typical operations. It includes ancillary activities such as renting an idle facility or foreign currency gains. This income may happen on an annual basis, but it is considered unrelated to the company’s typical operations.

Extraordinary income (or loss) occurs when money is gained (or lost) resulting from an event that is deemed both unusual and infrequent in nature. Examples of such extraordinary happenings could include damages from a natural disaster or the early repayment of debt.

Many companies may not have either other income or extraordinary income in a given year. If this is the case, then earnings before interest and taxes is the same as operating income. Regardless of how it is calculated, EBIT is especially relevant to bondholders and other debtors who use this figure to calculate a firm’s ability to “cover” or pay its interest payments with its income for the year.

508.09 NET EARNINGS (OR LOSS)

Net earnings or net income is the proverbial bottom line. It measures the amount of profit a company makes after all of its income and all of its expenses. It also represents the total dollar figure that may be distributed to its shareholders. Net earnings are also the typical benchmark of success. Just a reminder, however, many companies report net losses rather than net earnings.

How do we calculate net earnings?

Net Earnings = Earnings Before Interest and Taxes – Interest Expense – Income Taxes

Interest expense refers to the amount of interest a company has paid to its debtors in the current year. Meanwhile, income taxes are federal and state taxes based upon the amount of income a company generates. Often a company will defer its taxes and pay them in later years.

Net earnings are particularly important to equity investors because it is the money that is left over after all other expenses and obligations have been paid. It is the key determinant of what funds are available to be distributed to shareholders or invested back in the company to promote growth.

508.10 **RETAINED EARNINGS**

Retained earnings are the amount of money that a company keeps for future use or investment. Another way to look at it is as the earnings left over after dividends are paid out. Generally, a company has a set policy regarding the amount of dividends it will pay out every year. In this case, 70% of net earnings become retained earnings.

Calculation of retained earnings:

Retained Earnings = Net Earnings – Dividends

To better understand retained earnings, we need to explain the nature of dividends. Dividends are cash payments made to the owners or stockholders of the company. A profitable

For further information see Suite 406 "Analyzing Company Reports"