

FUNDAMENTAL ANALYSIS

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FUNDAMENTAL ANALYSIS I (I) Introduction, (II) Quantitative/Qualitative

I. Introduction

Basic Assumptions

(1) A stock price does not fully reflect a stock's intrinsic value (true value) and (2) the stock market will reflect the fundamentals in the long run.

However, the questions that persist in this type of analysis are (1) Will the stock reflect its intrinsic value? If so, (2) how long until it does?

Fundamental Analysis

- A method used to evaluate a security (in this case, stocks) to measure its intrinsic value (true value).
- Involves studying everything that can affect the value of the security including macroeconomic factors (i.e. overall economy and industry conditions) and company-specific (i.e. financial conditions, management).
- End-goal is to compare the intrinsic value vis-à-vis current market price and determine whether it is underpriced = buy, or overpriced = sell.

II. Quantitative / Qualitative

Financial Statements are used as evaluation tools

- Used to determine value by focusing on underlying factors that affect a company's actual business and its future prospects.
- Types of evaluation: Quantitative and Qualitative
 - **Quantitative** refers to numeric, measurable characteristics about a business
 - **Qualitative** refers to less tangible factors relating to quality or character such as board members and key executives, brand-name recognition, patents and or proprietary technology. Qualitative evaluation can apply to the Company or the Industry

III. Company / Industry

The Company

- **Business Model:** What does the company do?
- **Competitive Advantage:** Does the company have a Unique competitive position, Sustainable and Efficient operations?
- **Management:** Can the business model be properly executed?

An investor can look up these information from Annual Stockholders Meetings, Quarterly Briefings, Management Discussion and Analysis (found in quarterly or annual Financial Statements). It is also important to look into Past Performance and the company's ability to provide Financial and Information Transparency.

The Industry

- **Customers** – Know if the business relies on a small number of customers (a red flag or a negative) or diversified number of customers because the loss of each customer could dramatically affect revenues.
- **Market Share – Good businesses have an "economic moat,"** or a competitive barrier serving to protect its current and future earnings, along with its market share. Market share is important because of economies of scale. A bigger firm is in a better position to absorb the high fixed costs of a capital-intensive industry.
- **Industry Growth** – Amount of customers must be grow otherwise without new customers, a company has to steal market share in order to grow.
- **Competition** - Industries with limited barriers to entry and a large number of competing firms create a difficult operating environment. An important factor is pricing power or the ability of a supplier to increase prices and pass those costs on to customers.
- **Regulation** - Certain industries are heavily regulated due to the importance or severity of the industry's products and/or services. In industries where one or two companies represent the entire industry for a region (such as utility companies, i.e. energy, water), governments usually specify how much profit each company can make. While there is the potential for sizable profits, they are limited due to regulation.

IV. Financial Statements

- Balance Sheet
- Income Statements
- Cash Flow Statement
- Management Discussion and Analysis (MD&A)

V. Balance Sheets (Statement of Financial Condition)

- A snapshot of a company's health - how much a company owns (Assets), how much it owes (Liabilities). The difference between what it owns and what it owes is its Shareholder's Equity (also known as Net Assets).

Assets = Liabilities + Shareholders' Equity

Assets are resources that the business owns or controls at a given point in time. Includes items such as cash, inventory, machinery and buildings.

Liabilities + Shareholders' Equity is the total value of the financing the company has used to acquire those assets. **Liabilities** represent debt (which of course must be paid back), while **Equity** represents the total value of money that the owners have contributed to the business, including *Retained Earnings* (profit made in previous years).

Assets are classified into Current Assets and Non-Current

Current Assets are likely to be used up or converted into cash within one business cycle (usually 12 months). Three very important current asset items found on the balance sheet are: **Cash, Inventories and Accounts Receivables.**

- **Cash** offers protection against tough times and provides more options for future growth. Growing cash reserves often signal strong company performance while a dwindling cash pile could be a sign of trouble. However, if plenty cash becomes a permanent feature in the balance sheet, Investors need to ask why the money is not being put to use. Has the management run out of investment opportunities or is too short-sighted to know what to do with the money?
- **Inventories** are finished products that haven't yet sold. Companies have limited funds available to invest in inventory. To generate the cash to pay bills and return a profit, they must sell the merchandise they have purchased from suppliers. Inventory turnover (cost of goods sold divided by average inventory) measures how quickly the company is moving merchandise through the warehouse to customers. If inventory grows faster than sales, it is almost always a sign of deteriorating fundamentals.

FUNDAMENTAL ANALYSIS I (V) Balance Sheet

- **Receivables** are outstanding (uncollected bills). You can tell financial efficiency by how fast a company can collect what it is owed. If a company's collection period is growing longer, it could mean problems ahead. The company may be letting customers stretch their credit in order to recognize greater top-line sales but can spell trouble later on, especially if customers face a cash crunch. The quicker a company gets its customers to make payments, the sooner it has cash to pay for salaries, merchandise, equipment, loans, and best of all, dividends and growth opportunities.

Non-Current Assets are anything not classified as a Current Asset. This includes items that are fixed assets, such as property, plant and equipment (PP&E). Unless the company is in financial distress and is liquidating assets, investors need not pay too much attention to fixed assets. Since companies are often unable to sell their fixed assets within any reasonable amount of time they are carried on the balance sheet at cost regardless of their actual value. As a result, it's possible for companies to grossly inflate this number, leaving investors with questionable and hard-to-compare asset figures.

Liabilities + Shareholders' Equity is the total value of the financing the company has used to acquire those assets. **Liabilities** represent debt (which of course must be paid back), while **Equity** represents the total value of money that the owners have contributed to the business, including *Retained Earnings* (profit made in previous years).

Liabilities

Liabilities are classified into two **Current and Non-Current Liabilities**.

Current Liabilities are obligations the firm must pay within a year, such as payments owing to suppliers.

Non-current Liabilities represent what the company owes in a year or more time. Typically, non-current liabilities represent bank and bondholder debt.

Look for a manageable amount of debt. Generally speaking, if a company has more assets than liabilities, then it is in decent condition. By contrast, a company with a large amount of liabilities relative to assets ought to be examined with more diligence. Having too much debt relative to cash flows required to pay for interest and debt repayments is one way a company can go bankrupt.

FUNDAMENTAL ANALYSIS I (V) Balance Sheet

Quick Ratio: Subtract inventory from current assets and then divide by current liabilities. If the ratio is 1 or higher, it says that the company has enough cash and liquid assets to cover its short-term debt obligations.

$$\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$$

Shareholder's Equity represents what shareholders own. It is computed as total assets minus total liabilities.

$$\text{Shareholder's Equity} = \text{Total Assets} - \text{Total Liabilities}$$

The two important equity items are **Paid-in Capital** and **Retained Earnings**.

Paid-in capital is the amount of money shareholders paid for their shares when the stock was first offered to the public. It basically represents how much money the firm received when it sold its shares.

Retained Earnings are a tally of the money the company has chosen to reinvest in the business rather than pay to shareholders. Investors should look closely at how a company puts retained capital to use and how a company generates a return on it.

Considerations

Some assets and debt obligations are not disclosed in the Balance Sheet.

Companies often possess **Hard-to-measure Intangible Assets**. Corporate intellectual property (items such as patents, trademarks, copyrights and business methodologies), goodwill and brand recognition are all common assets that are not listed on company's balance sheets.

Off-balance sheet debt is a form of financing in which large capital expenditures are kept off of a company's balance sheet through various classification methods. Companies will often use off-balance-sheet financing to keep the debt levels low.

VI. Cash Flow Statement

- A record of a business' cash inflows and outflows over a period of time. Usually difficult to manipulate, some investors use this as a more conservative measure of a company's performance.
 - Operating Cash Flow (OCF): Cash generated from day-to-day business operations
 - Cash from Investing (CFI): Cash used for investing in assets, as well as the proceeds from the sale of other businesses, equipment or long-term assets
 - Cash from financing (CFF): Cash paid or received from the issuing and borrowing of funds

Like an Income Statement, it records financial performance over a specified period. But unlike the Income Statement, the Cash Flow Statement does not use accrual accounting which requires a record of revenues and expenses when transactions occur, not when cash is exchanged. On the other hand, the Income Statement, often includes non-cash revenues or expenses, which the Cash Flow Statement does not include.

Because it shows how much actual cash a company has generated, the Cash Flow Statement shows how a company is able to pay for its operations and future growth.

Companies produce and consume cash in different ways so the Cash Flow Statement is divided into 3 sections: **Cash Flows from Operations, Financing and Investing.**

Cash Flows from Operating Activities shows how much cash comes from sales of the company's goods and services, less the amount of cash needed to make and sell those goods and services. Investors tend to prefer companies that produce a net positive cash flow from operating activities. High growth companies, such as technology firms, tend to show negative cash flow from operations in their formative years.

Cash Flows from Investing Activities reflects the amount of cash the company has spent on capital expenditures, such as new equipment or anything else that needed to keep the business going. It also includes acquisitions of other businesses and monetary investments such as money market funds. You want to see a company re-invest capital in its business by at least the rate of depreciation expenses each year. If it doesn't re-invest, it might show artificially high cash inflows in the current year which may not be sustainable.

Cash Flow From Financing Activities describes the goings-on of cash associated with outside financing activities. Typical sources of cash inflow would be cash raised by selling stock and bonds or by bank borrowings. Likewise, paying back a bank loan would show up as a use of cash flow, as would dividend payments and common stock repurchases.

FUNDAMENTAL ANALYSIS I (VI) Cash Flow Statement

Free Cash Flow (FCF) signals a company's ability to pay debt, pay dividends, buy back stock and facilitate the growth of business. The excess cash produced by the company, can be returned to shareholders or invested in new growth opportunities without hurting the existing operations. A company's ability to pay for its own operations and growth, without relying on outside financing, signals to investors that it has very strong fundamentals.

Net Income
+ Amortization/Depreciation
- Changes in Working Capital
- Capital Expenditures

= **Free Cash Flow**

VII. Income Statement

Shows a company's performance over a specific time (reported quarterly/annually). Shows how much money the company generated (Revenue), how much it spent (Expenses) and the difference between the two (Profit/Net Income/Earnings/Bottomline) as a result of the business' operations for that period.

Those companies with low expenses relative to Revenue - or high Profits/Earnings relative to Revenue - signal strong fundamentals to investors.

Revenues (also called the Topline) represents all the money a company brought in during a specific time period, although big companies sometimes break down revenue by business segment or geography. The best way for a company to improve profitability is by increasing sales revenue. Recurring Revenue (continue year in and out) are the best revenues while Temporary/One-time gains are less valuable and should garner a lower price-to-earnings multiple for a company.

Expenses have 2 common types: **Cost of Good Sold (COGS)** and **Selling, General and Administrative Expenses (SG&A)**.

Cost of Goods Sold (COGS) represents the costs of producing or purchasing the goods or services sold by the company. This expense is directly involved in creating revenue.

Selling, General and Administrative Expenses (SG&A) includes marketing, salaries, utility bills, technology expenses and other general costs associated with running a business. SG&A also includes Depreciation and Amortization. Some corporate expenses, such as Research and Development (R&D) are crucial to future growth and should not be cut, even though doing so may make for a better-looking earnings report. Finally, there are Financial Costs, notably taxes and interest payments, which need to be considered.

Profits = Revenue - Expenses

There are several commonly used profit subcategories that tell investors how the company is performing.

Gross Profit = Revenue minus Cost of Sales.

Companies with high **Gross Margins** will have a lot of money left over to spend on other business operations, such as R&D or marketing. When cost of goods sold rises rapidly, they are likely to lower gross profit margins - unless, of course, the company can pass these costs onto customers in the form of higher prices.

Operating Profit = Revenues minus the Cost of sales and SG&A

Operating Profits represents the profit a company made from its actual operations, and excludes certain expenses and revenues that may not be related to its central operations. High **Operating**

FUNDAMENTAL ANALYSIS I (VII) Income Statement

Margins can mean the company has effective control of costs, or that sales are increasing faster than operating costs. Operating profit measures how much cash the business throws off, and some consider it a more reliable measure of profitability since it is harder to manipulate with accounting tricks than net earnings.

Net Income (also known as Earnings or Bottom line) represents the company's profit after all expenses, including financial expenses, have been paid.

A high **Profit Margin** usually means that it also has one or more advantages over its competition and can mean a company has a bigger cushion to protect themselves during the hard times. Companies with low profit margins can get wiped out in a downturn. And companies with profit margins reflecting a competitive advantage are able to improve their market share during the hard times - leaving them even better positioned when things improve again.

Note: Increasing Sales offers the first sign of strong fundamentals. Rising margins indicate increasing efficiency and profitability. It's also a good idea to determine whether the company is performing in line with industry peers and competitors.

a. Management Discussion and Analysis (MD&A)

Provides a clearer picture of what the company does and points out key areas in which the company has performed well. Disclosure is the name of the game. A company must give sufficient and honest information about current operations, future prospects or potential risks or uncertainties and address serious problems.

Other useful and revealing documents are:

- **Auditor's report (Report of Independent Accountants)** scrutinizes the company and identify anything that might undermine the integrity of the financial statements
- **Notes to Financial Statements** indicate Accounting Methods, Disclosures

VIII. Introduction to Valuations

a. Discounted Cash Flow (DCF)

b. Ratio Valuation

- Earning Per Share (EPS), Diluted EPS, Price-to-Earnings (P/E ratio or PER), Price/Earnings to Growth Ratio (PEG), Book Value (BV), Price-to-Book Value (PBV), Dividend, Dividend Yield, Return on Assets (ROA), Return on Equity (ROE)

a. Discounted Cash Flow (DCF) Method uses the premise that the current value of a company is simply the present value of its future cash flows that are attributable to shareholders.

$$DCF = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \dots + \frac{CF_n}{(1+r)^n}$$

CF = Cash Flow

r = Discount Rate (WACC)

Simply explained, if we know a company will generate per share in cash flow for shareholders every year into the future; we can calculate what this type of cash flow is worth today. This value is then compared to the current value of the company to determine whether the company is a good investment, undervalued (indicates a buy) or overvalued (indicates a sell).

Several different techniques essentially differ on what type of cash flow is used in the analysis. The **Dividend Discount Model** focuses on the dividends the company pays to shareholders. The **Cash Flow Model** looks at the cash that can be paid to shareholders after all expenses, reinvestments and debt repayments have been made. Conceptually they are the same, as it is the present value of these streams that are taken into consideration.

Note: The challenge lies in the implementation of the model as there are a considerable amount of estimates and assumptions that go into the model like forecasting the revenue and expenses for a firm 5 or 10 years into the future can be considerably difficult.

FUNDAMENTAL ANALYSIS I (VIII) Ratio Valuations

b. Ratio Valuations

Financial ratios are mathematical calculations using figures mainly from the financial statements, and are used to gain an idea of a company's valuation and financial performance.

Earning Per Share (EPS) = Net Earnings / Outstanding Common Shares. Indicates a company's profitability. Net Earnings can either be the last 12 months (trailing 12 months) or expected next 12 months. **Diluted EPS** includes the shares of convertibles or warrants outstanding in the outstanding shares number. *Note that it is more accurate to use a weighted average number of shares outstanding over the reporting term, because the number of shares outstanding can change over time.*

Price-to-Earnings (P/E ratio or PER) = Price / EPS. It is the most widely reported and used valuation. Also referred to as a Multiple, it shows how much investors are willing to pay per peso of earnings. If a company were currently trading at a multiple (P/E) of 15, the interpretation is that an investor is willing to pay Php10 for Php1 of current earnings.

- Generally a high P/E ratio means that investors are anticipating higher growth in the future.
- Generally an attractive P/E ratio is 10x or lower, while 15x is considered the historical average. However, the standard of the ratio will also vary widely among different companies and industries.
- The P/E ratio can use estimated earnings to get the forward looking P/E ratio.
- Companies that are losing money do not have a P/E ratio.

Price/Earnings to Growth Ratio (PEG) is a refinement of the P/E ratio and factors in a stock's estimated earnings growth into its current valuation. By comparing a stock's P/E ratio with its projected, or estimated, earnings per share (EPS) growth, investors are given insight into the degree of overpricing or underpricing of a stock's current valuation, as indicated by the traditional P/E ratio.

$$\text{PEG Ratio} = \frac{\text{P/E Ratio}}{\text{EPS Growth}}$$

The assumption with high P/E stocks (generally of the growth variety) is that investors are willing to buy at a high price because they believe that the stock has significant growth potential. The PEG ratio helps investors determine the degree of reliability of that growth assumption.

Book Value (BV) is the value of a company's assets expressed on the balance sheet. It is the difference between the balance sheet assets and balance sheet liabilities and is an estimation of the value if it were to be liquidated.

FUNDAMENTAL ANALYSIS I (VIII) Ratio Valuations

Price-to-Book Value (PBV) = Price / Book Value.

An indication of how much shareholders are paying for the net assets of a company. Companies trading below '1' are considered undervalued.

Note: Valuation ratios are also compared to the historical values of the ratio for the company, along with comparisons to competitors and the overall market itself.

Dividend is a distribution of a portion of a company's earnings, decided by the board of directors, to a class of its shareholders. It is most often quoted in terms of the peso amount each share receives (Dividends per Share). Note that some companies may or may not have a declared dividend policy and despite having one, has the option to issue or not in a particular year.

- Dividends can come in the form of Cash, Stock or Property
- Regular or Special (non-recurring, also called as “extra dividend,” usually declared when a company).
- Declaration Date, Record Date, Ex-date and Payment Date. The most important date to note is the Ex-date (a date that comes before the Record Date). An investor must own a stock a day before Ex-date to avail of the Dividend. On the Ex-date or after, the investor has the option to sell his stock and still be entitled to the dividend. On the Ex-date, the stock price usually drops approximately by the amount of the dividend to factor in that the company is paying out a part of its profits (reducing its cash).

Most secure and stable companies offer dividends to their stockholders. In some cases, their share prices might not move much, but the dividend attempts to make up for this. High-growth companies rarely offer dividends because all of their profits are reinvested to help sustain higher-than-average growth.

Dividend Yield is expressed as an annual percentage and is calculated as the company's annual cash dividend per share divided by the current price of the stock.

$$\text{Dividend Yield} = \frac{\text{Annual Dividend per Share}}{\text{Stock Price per Share}}$$

Note: When investing in equities, a shareholder earns from the dividend and capital appreciation (when a stock price appreciates from the acquisition cost).

Return on Assets (ROA) illustrates how well management is employing the company's total assets to make a profit. The higher the return, the more efficient management is in utilizing its asset base.

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Average Total Assets}}$$

FUNDAMENTAL ANALYSIS I (VIII) Ratio Valuations

Return on Equity (ROE) measures how much the shareholders earned for their investment in the company. The higher the ratio percentage, the more efficient management is in utilizing its equity base and the better return is to investors.

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Average Shareholder's Equity}}$$

You can find net income on the income statement, and Assets and Shareholders' Equity appears in the Balance sheet.

Both ROA and ROE gauge a company's ability to generate earnings from its investments. If ROA is sound and debt levels are reasonable, a strong ROE is a solid signal that managers are doing a good job of generating returns from shareholders' investments. On the other hand, if ROA is low or the company is carrying a lot of debt, a high ROE can give investors a false impression about the company's fortunes.

The big factor that separates ROE and ROA is financial leverage, or debt. If a company carries no debt, its shareholders' equity and its total assets will be the same. It follows then that their ROE and ROA would also be the same. But if that company takes on financial leverage (debt), ROE would rise above ROA.

Remember that **Assets = Liabilities + Shareholders' Equity**

The equation is also expressed as **Shareholders' Equity = Assets - Liabilities**.

By taking on Debt, a company increases its Assets thanks to the cash that comes in. But the company in turn also decreases its Equity by increasing Debt. In other words, when Debt increases, Equity shrinks, and since Equity is the ROE's denominator, ROE, in turn, gets a boost. At the same time, when a company takes on Debt, Assets (the denominator of ROA) increases. So, Debt amplifies ROE in relation to ROA.

Because ROE weighs net income only against owners' equity, it doesn't say much about how well a company uses its financing from borrowing and bonds. Such a company may deliver an impressive ROE without actually being more effective at using the shareholders' equity to grow the company. ROA - because its denominator includes both debt and equity - can help you see how well a company puts both these forms of financing to use.

FUNDAMENTAL ANALYSIS

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Customer Care
Unit 6K Fort Palm Spring Condominium
30th street corner 1st Avenue,
Fort Bonifacio, Global City,
Taguig C-1634, Metro Manila

+632 887 5457 (Telefax)

+632 887 6407

+63917 8633169

dmsi.care@houseofdauidgroup.ph

Twitter @itradeph

<http://itrade.ph>