CHAPTER II

THEORETICAL REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Theory

2.1.1. Free Cash Flow

There are quite a lot of variations in calculating free cash flow. In fact, the measurement of free cash flow can be differed from one research to another depend on the purpose of the researcher itself. The objective of financial statement utilization may vary depends on its user, thus the way how to calculate free cash flow may be different.

Regarding to Mills *et al.* (2002:38), free cash flow is the cash that available after meeting all current commitments, which is required payments continue operations. Those payments are including dividends, current debt repayment and regular reinvestment to maintain current operating activities. Free cash flow becomes a basis for measuring a company's ability to meet continuing capital requirements. Jensen (1986) stated that free cash flow is cash flow left after the firm has invested in all available positive NPV projects.

According to Brealey and Myers (2003) free cash flow (FCF) is the amount of cash that the firms can payout to investors after paying for all investment necessary for growth. Ross *et al.* (2010) stated that free cash flow refers to cash that the firm is free to distribute to creditors and shareholders because it is not needed for working capital or fixed asset investment.

Wild (2009), defining FCF as cash flow available to shareholders after operating asset reinvestments and debt payments. In line with Wang (2010), Lehn and Poulsen (1989), and Lang (1991), free cash flow is defined as operating income before depreciation expense, less corporate income tax, interest expenses, and cash dividend. The benefit of this definition is that it indicates how much the actual free cash flows were available for management exercise

Growth and financial flexibility depend on adequate FCF, Wild, Subramanyam, and Halsey (2007). Developing company will seeks for expansion to expand their business to gain more profit. In order to expand the business they need enormous amount of cash. Firstly, the company will apply internal financing before attempting to gain loan from external party. The source of internal financing is from the FCF. When the expansion is successful, the company will receive more revenue than the previous year. It means that the company is growing and a growing company is more attractive from the investor viewpoint.

Company which has excess amount of free cash flow may have better performance compared to another company because they can achieve an advantage over various opportunities which may not be achieved by the other company. Company with huge amount of free cash flow is predicted to be more survive in depraved situation. Furthermore, company which has negative free cash flow indicates that internal source of fund is insufficient to fulfill the demand of company investment so that it necessary to extend external fund in form of debt or issuing additional shares (Rosdini 2011:2).

Companies that have substantial free cash flow can take advantage of profitable investments even in tough times. In addition, companies with substantial free cash flow do not have to worry about survival in poor economic times. In fact, they often perform better in poor economic times because the can take advantage of opportunities that other companies cannot (Kimmel *et al.* 1998:312). Briefly, company with high free cash flow can take opportunity over better investment than other company because another company doesn't have that cash flow or lower free cash flow to take it.

The amount of free cash flow can be positive or negative. Positive FCF reflects the amount available for business activities after allowances for financing and investing requirements for maintaining productive capacity at the current level. In contrary, the result of FCF may negative for rapid growing business. This usually happens with companies that firstly go public. Rapid expansion of the business makes the company spend the resource of fund for investment activity. Investment here is in form of developing new product, build new building, open new branch, purchase equipment for production activity and many more.

Spending the fund in investment activity may result negative free cash flow. It means that the investment fund is higher than the earnings they received. Negative free cash flow is not always a bad sign. The business that having deficit in cash not because it is unprofitable, but rather because it is growing so quickly. A company with rapid growth sounds very interesting for the investors. It provides good news, not a bad news, as long as the business earnings more than the cost of capital. The investor will be glad to invest in the company as long as the business offers greater rate of return.

As stated by Jensen above regarding the definition of free cash flow, the existence of free cash flow may emerge conflict of interest between managers and shareholder. Conflict of interest is more severe when the company has high free cash flow is available.

The availability of free cash flow can be used to purchase treasury shares, retire debts, or just for maintaining liquidity. When the company generates high free cash flows, conflicts of interest that mostly arise between manager and shareholders are regarding to the utilization of the idle cash. The problem that may appear here is finding the way to motivate managers to invest free cash flow on profitable investment instead of investing the fund to the project that has low return and high cost of capital.

As mentioned earlier, there are numerous way how to calculate free cash flow. Here are some formulas that can be used to calculate free cash flow:

1. Free cash flow (Kimmel *et al.* 1998)

$$Free\ Cash\ Flow = \frac{Net\ Cash\ Provided\ By}{Operating\ Activities} - \left(\frac{Capital}{Expenditures} + \frac{Cash}{Dividends}\right)$$

In relation to that formula, free cash flow defined as the amount of discretionary cash flow a company has for purchasing additional investments, paying its debts, or adding its liquidity. The formula above helps investors understand a company's solvency and overall financial strength.

If the company can generate sufficient cash in operating activities, it will assure that the company has the ability to cover capital expenditures and dividend payments. If so, then the company appears to have satisfactory solvency. Moreover, it will give management additional flexibility to increase capital expenditures or dividend payments or retire its own stock or debt. Thus, the greater the free cash flow, the greater its option to use those cash to strengthen financial matter.

2. Free Cash Flow (Brigham and Houston 2003)

$$FCF = NOPAT - Net\ investment\ in\ operating\ capital$$

Notes:

NOPAT (net operating profit after tax) : EBIT (1 – tax rate)

Net investment in operating capital : total operating capital current year – total operating capital previous year

According to this formula, free cash flow is the cash flow actually available for distribution to all investors (stockholders and debtholders) after the company has made all the investments in fixed assets, new products, and working capital necessary to sustain ongoing operations.

Since free cash flow here represents the cash that available for distribution to investors, the higher value of free cash flow the better the company if seen from investor's point of view. This because company with highly generating free cash flow is consider as valuable investment as they predicted can meet their obligations in the future. For that reason, managers are intended to make the companies valuable by increasing the number of free cash flow.

3. Free Cash Flow (Wang, 2010)

$$FCF_t = \frac{OCF_t - Tax_t - IExp_t - CashDiv_t}{NetSales_t}$$

Along with Lehn and Poulsen (1989) and Lang *et al.* (1991) free cash flow is operating income before depreciation expense, less corporate income tax, interest expenses, and cash dividend. This formula is undertaken to be the formula to calculate free cash flow in this research. The benefit of this formula is it measure how much the actual free cash flow that can be distributed to shareholders or creditors.

2.1.2. Agency Theory

Jensen and Meckling (1976) firstly propose agency theory about the relationship between principal (shareholder or owner of a firm) with the agent (manager). It explains that the interest of management and shareholder interest often conflict, so that conflicts can arise between them. The shareholder wants to get high return on the investment they have put on the firm by receiving dividends. In the other hand, manager wants to receive compensation regarding the achievement they have made for the firm. Hence, managers can take actions to improve their personal wealth, rather than trying to maximize the market value. Conflicts of interest between manager and shareholder can be minimized by a monitoring mechanism to adjust the related interest. As a result, shareholder paid a certain fee to monitor the performance of manager. This will incurred agency cost for the management to pay the monitoring activity.

To reduce the agency cost, the management voluntarily gives financial information to the shareholder. By regularly reporting the financial statement to the shareholder, management expects that the agency cost will be decreased.

There are three main parties that have different interest on a firm. They are manager, shareholder, and employee. As the leader of the firm, manager is expected to make decision that will increase the wealth of shareholders. Instead of it, there are many practices in reality that manager tend to make decision that will grant personal interest. In this case, managers retain the free cash flow under their control and spend it on unprofitable investment or investment that grants negative Net Present Value. To prevent this action, shareholders as a principal do some control activities for instance: monitoring, incentives/reward policy, and punishment policy. Granting them incentives will incurred agency cost which lead to decreasing amount of shareholders wealth.

In fact, the most effective way to alter the behavior of the manager in order to maximize their performance is by giving reward (positive reinforcement). It expected that this reward can bring positive impact for manager and improve their performance. Giving punishments only carry pressure, worried, afraid, and the other negative feelings.

2.1.3. Firm Value

According to Kumar and Sharma (1998), there are three main purposes of a business entity. Those purposes are to maximize profit, maximize return and maximize welfare. Basically, the first and the second purpose have quite similar meaning. It because both of them are measured based on the revenues that have been achieved and the expenses that have been spent.

The last purpose is the critical goal of a business entity. Solomon (1963) stated that the purpose of a business entity is to maximize its value to the shareholders. The firm value is reflected by the market value of firm's share (market share) and the market value of firm's share itself reflects investment decision, financing, and firm's dividend. The market value of firm's share also reflects particular assessment from the whole market performer over the firm value.

Firm value is investor's perception toward the firm's degree of success which is commonly linked to firm share price (Sujoko and Soebiantoro, 2007). If the investor's perception toward the probability of firm's success in the future is high, thus market value of shares will increase. According to Husnan (2000), firm value defined as the price that the buyer willing to pay if the firm is sold. The main purpose of the company is to maximize the shareholders' wealth. Shareholders' wealth can be improved through enhancing firm value. Van Horne (1998) stated that firm value is represented by the market price of the company's common stock.

The purpose of a company establishment is to increase the firm value or the presence of company's growth. Firm value also called as enterprise value. It represents the entire economic value of a company. More precisely, firm value is a measure of the theoretical takeover price that an investor would have to pay in order to acquire certain firm. Firm value also can be defined as the size of the success of company in improving the prosperity of shareholders.

Another definition of firm value is a measure of a company's total value, it frequently used as a more comprehensive alternative terminology to equity market capitalization. The market capitalization of a company is simply its share price multiplied by the number of shares a company has outstanding.

Maximizing firm value has truly important meaning for a firm. By maximizing firm value it means that maximizing the welfare of shareholder as well, which is the major purpose of the firm. Firm value is reflected on market value of share. Higher share price result on higher firm value. Higher firm value will build market trust not only on current firm performance but also on firm prospect in the future.

The improvement of firm value will increase the wealth and welfare of the shareholders as well. Firm value is important matter as a consideration before making decisions whether or not to invest on certain company. Higher firm value will be followed by higher shareholders welfare, Brigham and Gapenski (1996). According to Fama (1978), firm value is reflected on the share price of the firm. It means that the higher the share price, the higher the firm value. High firm value becomes a desire for shareholders because along with the increase of firm value, it shows that the welfare of the shareholders is increase as well.

Firm value is a certain condition that has been achieved by a firm as representation of people trust toward the firm after passing several processes since the firm was established until present. According to Baye and Prince (2014), they define firm value as the present value of the firm's current and future profits. The value of a firm is linked to profit maximization. A firm looking to maximize their profits is actually concerned with maximizing its value. For itself, it is important for a firm to be able to determine its present value accurately.

There are quite a lot of formulas that can be used to calculate firm value. Those formulas are Tobin's Q, Price to Earnings Ratio (PER), and Price to Book Value ratio (PBV). This research uses price to book value ratio in calculating firm value. PBV is the ratio between current shares price to its book value. PBV shows how many times investors appreciate firm shares based on the book value per shares. The formula is shown below.

$$P/B\,ratio = \frac{current\ stock\ price}{book\ value\ per\ share}$$

Book value per share is equal to total equity numerator and divided by the amount of outstanding shares as denominator.

PBV is a ratio that can be used to determine the intrinsic value of shares, whereas this value can affect investor's decision whether to purchase or sell the shares. PBV could illustrate how much equity investors are paying for each cash in net assets. It also gives an overview to which how far a company can create firm value based on the equity that has been invested. Company that has increasing PBV ratio from year to year indicates that the company is succeeded in creating and improving firm value. The higher PBV ratio suggests that the investors have high perception to the company. Higher perception leads to higher firm value.

PBV ratio has some advantages namely:

1. The available information of book value is relatively stable so that it can be compared to market value.

2. PBV provides consistent accounting standard for all companies, thus it can be used to compare one company to another. PBV is comparable among the same type companies, which can be used to give a sign of undervaluation or overvaluation.
3. Companies with negative earnings, which cannot be valued using PER (price earnings ratio), can be measured using PBV.

2.2. Previous Research

Prior to this research, there are several researches that have been conducted by the authors from several countries regarding the impact of free cash flow towards firm value.

Wang (2010), study about the impact of free cash flows and agency costs on firm performance. This research took a data sample of all publicly companies listed in Taiwan Stock exchange ranging from year 2002-2007. The result of this study finds that there is significantly positive relation between free cash flow and agency cost on firm value. Firm performance in this research is represents as firm value.

Vogt and Vu (2000) investigate the impact of large free cash flow on the long-term market performance of the firm based on Value Line Investment Survey. This study took a sample from Value Line Investment Survey particularly from the list of “Largest Free Cash Flow Generators”. The sample taken from 12 October 1979 until 31 December 1995 and totally 362 firms are selected as the sample of study. The result of study found that the publicity associated with the list of largest free cash flow generator is related to subsequent behavior changes of the firm. Firms tend to reduce the capital spending, increase dividends and slow the rate of net share issuance particularly for firms that has been mismanaging their free cash flow. As a result, stock price performance responds positively after being listed on Value Line Investment Survey.

Mansourlakoraj and Sepasi (2015) investigate the relationship between free cash flow, capital structure and the value of listed companies in Tehran Stock exchange. The research included 80 companies during 2009-2013. Their findings of study showed that free cash flow and capital structure have significant and positive effects on firm value.

Yundianti (2004) examines the effect of investment opportunity set and earnings management to the relationship between free cash flow and shareholder value. This research reaches the conclusion that positive free cash flows have significant and positive relationship with shareholder value. For companies with low growth prospect but have high free cash flow, the increasing amount of dividend payment will positively affect the relation between free cash flow and shareholder value because this policy showed mitigation of management policy towards overinvestment.

Putri (2013) analyze the effects of institutional ownership, free cash flow, and investment opportunity set towards firm value with debt policy as intervening variable. Samples in this research are non-financial company in

Indonesia Stock Exchange in the period of 2008-2011 which amounts to 103 companies. This research found that institutional ownership, free cash flow, and investment opportunity set have significant effect to debt policy. Subsequently, debt policy has significant effect to firm value.

Jensen (1986) investigates the relationship between ownership and combination with free cash flow and their effect on the firm value and stockholders' assets. The research found that free cash flow has negative relationship with firm value. Firms that have free cash flow are more likely to waste the resource and spending it on unprofitable investment which furthermore can lead to decline in firm value.

Heydari *et al.* (2014) examine the relationship between free cash flows and firm performance from Tehran Stock Exchange. The population of this study includes all companies listed in Tehran securities and stock exchange organization during 2006-2012. After screening the data based on some conditions, 63 companies are selected to be the sample of research. There are four proxies that used to estimate firm performance which are return on assets, return on equity, Tobin's Q, and stock return. The study found that there is negative and significant relationship between free cash flow towards all evaluative factors of firm performance.

Brush *et al.* (2000) studied about free cash flow hypothesis for sales growth and firm performance. The sample is taken from year 1988-1995 resulting 1570 companies in USA. This research conclude that firms which possess free cash flow gain less from sales growth, which imply that low sales growth means decrease in firm performance. Otherwise, firms which possess no free cash flow generate higher sales growth and increasing number of firm performance. But, good governance can mitigate the influence of free cash flow on sales growth and performance.

Richardson (2006) investigates the extent of firm level over-investment of free cash flow and whether firms' governance structures are associated with over-investment of free cash flow. This study takes a sample from Compustat in USA during period 1988-2002 with 58,053 firms included on the observation. The research found that over-investment is concentrated in firms with the highest levels of free cash flow and become a common problem for US firms. This problem will lead to poor firm performance in the future. Moreover, certain governance structures such as the presence of activist shareholders seem to mitigate over-investment.

2.3. Hypothesis Development

Firm value is the perception of investors towards the degree of success of the company. It is important for the company to maintain the firm value in order to gain trust from shareholders to keep investing the fund on that company. Since the main purpose of the company is to maximize shareholders' wealth, by maximizing firm value, the company also maximizes the shareholders' wealth.

Firm value is reflected on the share price of the company. If the share price goes up, then the firm value will goes up too. If the perception of investors towards the company's prospect in the future is promising, then there will be an increasing demand of shares. Investors' presume that this company will give them high return in the future. If the demand increases, there will be more and more investors are attracted to invest on that company. As the demand of shares is increase, the share price will goes up.

Since firm value is assessed from the share price of the company, thus, when the share price increases, the firm value will increase as well. Hence, it can be concluded that when the investor perception towards the company's success in the future is high, the demand of shares will increase, and then the share price will goes up in line with the increase of firm value.

It is the duty for manager as the representative of the owner to maintain and improve the company's performance. According to Moeljadi (2006:3), "in order the purpose of maximizing shareholders' wealth can be achieved, then it is necessary to make some relevant financial decision that have an impact on the firm value. Those financial decisions are (1) investment decision, (2) financing decision, and (3) dividend decision".

A healthy company can be seen from how much free cash flow they can generates during the accounting period. If they have high free cash flow, they may choose any option to use those cash to improve firm value. As the purpose of the firm is maximizing the shareholders' wealth, management may consider exercising more capital spending if there are available new investment opportunities to increase firm value. Vogt (1997) argue that firms whose announced capital spending decision was responded by positive stock price on capital market. This implies that firms want to build shareholders' trust and prove that management could manage the fund and sustain the business operation to improve firm value which later on will increase shareholders' wealth.

A company that has free cash flow usually uses it for expanding the business. If the expansion is successful, then the company will collect more revenue. The increasing amount of revenue compared by more the industry average over a sustain period will increase the firm growth. As the company still in the process of expansion, the probability of growth is promising. The investors see the opportunity of firm growth as an attractive investment. They are attracted to invest because growing company has the probability of increasing share price in the future.

Since there are more investors attracted to invest on the company, the demand of their share is increase. When the demand of share is increase, the price goes up. When the price goes up, the firm value will increase as well. It has mention earlier that high firm value is a desire for the entire shareholder. This is because high firm value identic with high shareholders welfare. Shareholders' welfare is related to their wealth. The wealthiness of shareholders is presented on the market value or market price of shares.

Several previous researches that examine the influence of free cash flow on firm value found a distinct result. Some of them found that free cash flow has positive impact on firm value. But, the other research found that free cash bring negative impact on firm value. Since the majority of research found that free cash flow has positive impact towards firm value, thus this research predict the impact of free cash flow on firm value for Indonesian companies that it will end up with the same result

Thus, from the explanation above the formulation of hypothesis is:

H1: There is positive impact of free cash flow towards the firm value.