

The reciprocal relationship between profitability and capital structure and its impacts on the corporate values of manufacturing companies in Indonesia

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Abstract

Purpose – The purpose of this paper is to investigate the reciprocal relationship between profitability and capital structure and its impacts on the corporate values of manufacturing companies in Indonesia.

Design/methodology/approach – This research is a quantitative research using the general structural component analysis as the analysis tool. This research involved a number of manufacturing companies registered in the Indonesia Stock Exchange in 2008–2015 period.

Findings – Profitability has a negative significant influence on capital structure, indicating that profitability is a determining factor upon the corporate capital structure. This finding also implies that the improvement in profitability in the forms of return on investment, return on equity and net profit margin triggers decrease in the proportion of debt within the capital structures of manufacturing companies registered in BEI or Indonesia Stock Exchange.

Originality/value – Previous research only addressed the one-way correlation between profitability and capital structure, whereas this research measured the two-way correlation and reciprocal relationship at the same time. This research measured the influences of profitability and capital structure on the corporate value, in order to find a consistent finding that has not been yet obtained in previous research. This research also attempted to find out whether the use of the same variables within different time and setting (in Indonesia) leads to different results. The inconsistent findings also motivate the researcher to re-explore the reciprocal influence of corporate profitability on corporate capital structure and its effect toward the corporate value.

Keywords Profitability, Capital structure, Reciprocal relationship, Corporate values

Paper type Research paper

1. Introduction

The development of businesses in Indonesia is considered exhilarating, as it has significantly contributed to the development of other sectors. Industrial companies also have successfully produced varied products and have obtained higher sale volume, and significantly higher profit that eventually improve the values of the companies. Corporate value is one of indicators used by investors in predicting the success rate of a company, which is also often related to the stock price, for a higher stock price indicates a higher corporate value. High corporate value determines the trust given by the market upon the prospects of a company in the future. Therefore, basically, each company will always try to improve its corporate value by improving the stock price since improvement in a company's stock price reflects the prosperity of the company owners who refer to the investors.

The agency theory believes that there is a separation pattern between company principles as company owners and the agents as the company's board of management, which refers to the board of directors, who are required to ensure that any activity run by the company is done in the name of the company owners (Jensen and Meckling, 1976). When the management of a company is no longer run by the owners, instead it is fully given to other parties, problems and conflicts are likely to occur between company owners and the board of managers, which



is often referred as agency problems. Agency relationship is made out of a contract signed by the owners and the agents wherein the agents offer their service to fulfill company owners' interests. Managers are not responsible for wrong decision making, as the risks are under the responsibility of the shareholders. This conflict is often triggered by the condition in which shareholders only care about systematic risks upon their stock in a company, for they simply made investment in the form of well-diversified portfolio; however, managers tend to be more concerned about any possible corporate risks.

The improvement of corporate value with the increase in the stock price is often misunderstood as improvement of corporate profit. Company managers as company agents always try to increase the company profit at the highest amount possible. The reputation of company managers is reflected by the increase in company profit, followed by the increase in the stock price. Eventually, owners' wealth is increased, followed by better prosperity for the shareholders.

Shareholders/investors will always motivate the company managers to work hard and run any programs to improve the company stock price. Improving the stock price can be done by improving the corporate profit through investment in projects that are ascertained to give a higher return out of the capital invested in the projects. Shareholders also often demand company managers to work within the most efficient amount of finance by making more production cost saving, including the cost of raw materials, workers' wages, overhead costs, marketing costs and other administration costs. Furthermore, the production cost efficiency that is followed by increasing sales volume is able to significantly improve the corporate profit. The increase in the corporate profit motivates the shareholders to request for profit sharing in the form of a dividend.

Managers tend to think that the higher profit is obtained out of their hard work, as it is the managers who work hard to make it happen; thus, it is appropriate that managers receive appreciation of their hard work in the form of bonus. This expectation of managers can only be realized by the shareholders. Unfortunately, the condition in which shareholders request for higher dividend causes the managers to make opportunistic actions to fight for their concerns. Increasing the corporate value requires investments in various profitable projects in the future, which can be done through some ways: through extern investment (debts and new share emissions) and intern investment (retained profit).

When extern investment (debts and new share emissions) is done by using the extern fund in the form of debts, it should be understood that debts have both positive benefits and negative impacts, in which debts provide broader chance for business owners to develop their enterprises within a short length of time, without being required to use the private capital to develop the company. Besides, the debt also gives a higher profit from the tax. Debts decrease the tax deductible profit. On the contrary, debts might also be burdensome for a company since debts give some fixed expenses in the form of liability to pay for the interest and the main debt that disrupts the liquidity of a corporate finance. The worst probability caused by the preference to use extern fund in the form of debt is the possibility for a company to face bankruptcy due to wrong decision making.

Different corporate decisions in the determination of fund sources lead to different impacts or consequences. Paramu (2006) stated that debenture issuance gives tax protection, for debenture interests decrease the amount of tax to pay. However, debenture increases operational risks, especially within the time when a company obtains lesser profit. Capital fulfillment through share issuance gives company owners a stronger control upon the board of the managers.

Fund resource is actually the composition or the structure of a company's capital. Groth and Anderson (1997) stated that efficient composition might decrease the capital expenses. Decreased capital expenses directly increase the return and improve the corporate value. Corporate decisions to easily use debts gradually give more liability for the companies since

they have to pay for their debts. Some companies failed to pay their debts and some others were even stated bankrupt. To date, there has yet not been any precise formulation to determine the ideal amount of debt and equity within the capital structure of a company.

According to Weston and Brigham (1994), increases in the amount of debts result in more risks for a company, for the debt requires a company to maintain its profit at the certain amount before the amount of interests and tax (EBIT) grows higher. Companies that have a higher amount of debt face a higher risk. However, better economic condition gives companies opportunity to obtain a higher profit. It is important that companies should keep their finance balanced by setting ideal proportion between the debt and personal equity, for both sources reflect the capital structure of the companies.

The theory of optimal capital structure proposed by Modigliani and Miller (1963) suggests companies to give higher proportion for equity when the companies obtain low profit or even loss prior to the concern that when the cash flow is disrupted, there dividend payment will be delayed or they might even fail to pay the dividend. On the contrary, when companies are in the profitable situation, financing the companies from the debts is likely more effective since the interests remain stable without being influenced by profit improvement, unlike the regulation of dividend sharing.

However, the trade-off theory recommends companies to keep their debt up to a certain amount where the tax shield obtained from higher debts is equal to the financial distress. Financial distress refers to the costs that should be paid when a company goes bankrupt, reorganized or when agency cost improves with the decline of the corporate credibility. The optimal debt proportion is obtained when the tax shield reaches the maximum amount toward the cost financial distress. The trade-off theory requires company managers to create the trade-off situation by balancing the proportion between tax shield and financial distress cost within the capital structure, whereas the pecking order theory (Myers and Majluf, 1984) mentions that companies with high profitability tend to have low debt, for they have adequate amount of internal funding resources. Wrong decisions in determining the capital structure give significant negative impacts; moreover, the use of excessive extern fund from the debt gives heavier expenses since companies need to pay for the debt interests. This condition also increases the financial risk if a company is unable pay the debt interests and installments when the debt is due.

Research works done by Nagano (2003), Saeedi and Mahmoodi (2009) stated that corporate profitability improves the capital structure and it positively influences the capital structure. On the contrary, Titman and Wessels (1988), Jorgensen and Terra (2003) found out that profitability decreases the corporate capital structure, for it negatively influences the capital structure. Research findings on this matter are inconsistent. Seen from the pecking order theory, companies with high profitability have an adequate amount of internal fund and they have less necessity to make investment using fewer extern fund (Schoubben and Hulle, 2004).

Pandey (2001) stated that profitability improves the capital structure and positively influences the capital structure. This indication shows that corporate ability to improve the profit through certain corporate operational system gives positive influence on the improvement of the internal fund resource in the forms of retained earning, giving higher proportion for the personal equity. Improvement in the amount of fund from intern resources makes the proportion of capital from personal equity in the forms of retained earning higher, which gives positive effects for the enhancement of the capital structure.

According to the optimal capital structure theory, capital structure has certain influences on the corporate value. This theory states that precise proportion between debt and equity creates optimal capital structure that eventually improves the corporate value *perusahaan* (Modigliani and Miller, 1958; Miller and Modigliani, 1961; Myers, 1984). The positive influence of capital structure on corporate values as proposed in the capital structure theory refers to the capital structure that is able to improve the corporate value

at the highest level. This theory underlies the view that capital structure can be used to improve the corporate values.

Mumtaz *et al.* (2013), in a research entitled "Capital Structure and Financial Performance: Evidence from Pakistan (Kse 100 Index), measured four financial variables including the capital structure, company measurement, financial performance, and corporate value. It is found that capital structure positively influences the corporate value. The part of the capital structure theory that concerns investors' perception in determining the financial resources used by a company is the pecking order theory. To prevent investors from having negative perceptions, the theory suggests that the order of financial resources should be retained earning and right issuance (Myers, 1984).

It can be inferred from the above explanation that there are some gaps among the previous research findings, which should be discussed in this research, including the correlation between profitability and capital structure discussed by Chen and Chen (2011), Hermuningsih (2013), and the correlation between capital structure and profitability discussed by Habib *et al.* (2016), Manurung *et al.* (2014), in which they only discussed one-way correlation between those variables. Meanwhile, this research measured the two-way correlation and reciprocal relationship at the same time. This research measured the influences of profitability and capital structure on the corporate value, in order to find a consistent finding that has not been yet obtained in previous research. This research also attempted to find out whether the use of the same variables within different time and setting (in Indonesia) leads to different results.

Regarding the research background, it can be seen that research findings on this issue are still inconsistent. Some researchers found a positive correlation between the two variables, whereas other researchers found a negative correlation. Some researchers found the correlation significant, whereas others found an insignificant correlation; some others even found no correlation between the variables. In this research, the researcher wanted to fill this research gap. The inconsistent findings also motivate the researcher to re-explore the reciprocal influence of corporate profitability on corporate capital structure and its effect toward the corporate value. This is an interesting finding for readers because this study reassesses the influence of profitability on capital structure and dividend policy of companies in Indonesia. However, there is little information regarding this topic in Indonesia.

In Indonesia, it is very difficult to find a perfect market reality or there is almost no such reality; therefore, the argument for the irrelevance of fiscal policy does not apply in the real world because the perfect market, which is the main requirement, has never been found in practice. The financial policy irrelevance argument is not possible, and conversely the group that disagrees with the financial policy irrelevancy argument states that the argument for financial policy irrelevance is realistic because the argument is built on the inherent reality of the capital market, the imperfect market. Wu and Xu (2005) suggested that funding decisions and dividend policies will affect the value of the company in imperfect capital market conditions such as taxation, agency conflict, and asymmetrical information. The statement is based on the opinion of Modigliani and Miller (1963), which showed that funding from debt will increase the value of the company because of the tax savings from interest payments from debt, and some of the findings of empirical studies conducted by Bhattacharya and Ritter (1983) and Miller and Rock (1985) revealed that dividends will affect stock prices (company value) as dividend payments are a positive signal about the company's prospects in the future.

Several previous studies were used as references in this research separately, such as the Profitability to Capital Structure by Chen *et al.* (2009), Abor (2005), Hung *et al.* (2002), Al-Najjar and Taylor (2008), Abdulla (2017); the Capital Structure to Profitability by Al-Kayed *et al.* (2014), Alipour *et al.* (2015), Li and Stathis (2017), Mukherjee and Mahakud (2010); the Profitability to Corporate Values by Khojastehpour and Johns (2014), Nanda and Panda (2018),

Scott (2007), Thomsen (2005), Panigyrakis *et al.* (2009); and the Capital Structure to Corporate Values by Tse and Jia (2007), Bosch-Badia *et al.* (2017), Chow *et al.* (2018), La Rocca (2007), Wang and Zhu (2013). The originality of this paper shows comprehensively the reciprocal relationship between profitability and capital structure and its impacts on the corporate values of manufacturing companies in Indonesia.

2. Literature review

Financial policies cover any policies in corporate funding, investment making and dividend sharing. Financial decisions are taken by corporate leaders to achieve certain target in order to increase the corporate value. Seen from a financial management perspective, the main goal of a company is to grow the wealth of the shareholders by improving the corporate value.

Decisions to choose certain funding resource are often dilemmatic for financial managers. A financial manager should be able to save more fund, including extern and internal fund, in the most efficient way to minimize the amount of equity that should be given by the company. Capital costs that appear from the financial decisions should be taken as the direct consequences from the decisions made by managers. Poor financial decisions might result in a higher amount of fixed costs in the form of high capital costs, which cause poor corporate profitability.

In order to improve its corporate value, a company should allocate fund to invest in profitable projects in the future. The fund for the investment can be obtained from extern source (debt and new right issuances) and from internal source (retained earning) (Figure 1).

Corporate profitability holds a crucial role in determining the fund resources to be used in the capital structure besides other determinants of capital structure. Therefore, corporate decision in designing the capital structure in order to improve the corporate value is influenced by the corporate profitability. Corporate profitability allows investors to see how efficiently a company spends its fund for its operational activities to earn higher profit.

Profitability is one of determining factors in company leverage, for it is one of internal fund resources. Weston and Brigham (1994) mentioned profitability as one of factors that might enhance the capital structure and positively affect the capital structure. In addition, Pandey (2001) stated that high-profit companies tend to use more debt to obtain more benefits from the tax shield. Ramzy *et al.* (2017) stated that profitability positively influences the capital structure and it improves the corporate capital structure. In this context, profitability indicates how efficiently a company runs its enterprises. The company's capability in earning higher profit out of the operational activities should be the main focus in the attempts to improve the corporate capital structure position. Nagano (2003) found an evidence for the positive correlation between profitability and capital structure. Saeedi and Mahmoodi (2009) also found the evidence that the corporate profitability level is able to improve the capital structure, and it positively influences the capital structure. Meanwhile, Titman and Wessels (1988) found that profitability declines the capital structure, for it negatively influences the corporate capital structure. Companies with high profitability have adequate internal funding resources, and they have less necessity to make investment using extern fund sources (Schoubben and Hulle, 2004). It can be implied that

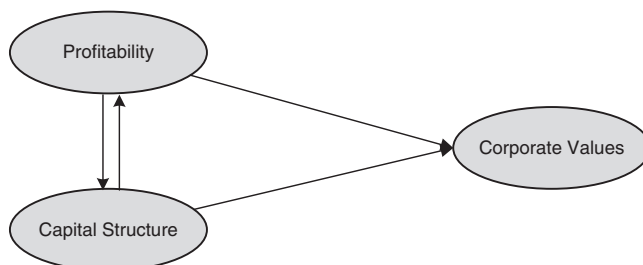


Figure 1.
The reciprocal
relationship between
profitability and
capital structure and
the impacts on
corporate value

this theory predicts the negative influence of profitability on capital structure. Regarding the explanation, the first hypothesis is formulated as follows:

H1. Profitability significantly influences the corporate capital structure.

Basically, capital structure deals with the fund sources, either the fund comes from intern or extern sources. Internal fund sources are the sources of fund from the company itself in the form of retained dividend, whereas extern fund comes from creditors or any other fund from corporate owners. Brigham and Houston (2004) stated that capital structure is the proportion of debt usage. Fama and French (1998) analyzed the relationship among tax, financial decisions and corporate performance, whose result shows that corporate debt does not correlate with corporate profit tax. A higher degree of leverage creates agency problem between shareholders and creditors since they predict that the leverage negatively correlates with the corporate profitability. Hadlock and James (2002) stated that companies that use more fund from the debt tend to expect higher return. On the contrary, Abor (2005) found a positive and significant correlation between short-term debt ratio divided by the total assets and the return of equity (ROE). However, the correlation between total debt and the return level shows that the ratio of total debt to total assets has a positive and significant correlation to the ROE. Thus, the second hypothesis of this research is formulated as follows:

H2. Capital structure significantly influences the corporate profitability.

Corporate value can be measured through the market value ratio. Market value ratio is a ratio that reflects the correlation between stock price and corporate profitability, as well as the corporate value. Using this ratio, corporate managers are able to see the creditors' responses upon the corporate performance and the corporate prospects. Sudarma (2004) found that profitability positively correlates with corporate value. In addition, Nagano (2003) found out that companies prefer using fund from the profitability to use extern fund source in improving the corporate value. Profitability ratio measures the corporate capability in making profits out of the enterprises. As a result, investors are able to see the how efficiently a company utilizes its assets in running its enterprises to earn profit. Profitability ratio is the final result of various policies and decisions made by a company. Mardiyati *et al.* (2012) stated that profitability has a positive influence on corporate value. It implies that the higher the profit, the higher is the corporate value. High profit reflects excellent corporate prospects, which attracts investors to raise the demand upon corporate shares. A higher demand upon corporate shares increases the corporate values. Based on this explanation, the third hypothesis of this research is formulated as follows:

H3. Profitability significantly influences the corporate value.

Basically, capital structure is closely related to the source of fund, either the fund comes from intern or extern sources. Modigliani and Miller (1963) explained that financing activities using debts improve the corporate values, for there will be higher amount of tax shield from the debt interest payment. Wolfgang *et al.* (2006) also mentioned that capital structure improves the corporate value. Chien *et al.* (2010) added up that, in fact, any changes upon the debt ratio also influence the corporate value, either positively or negatively. In addition, Kodongo *et al.* (2015) found out that capital structure has a positive influence on Tobin's *Q*. Regarding this explanation, the fourth hypothesis of this research is formulated as follows:

H4. Capital structure significantly influences corporate value.

3. Research method

This research is a quantitative research using the general structural component analysis (GSCA) as the analysis tool. The least square method was applied in the parameter

estimation process. The GSCA method was also applied to investigate relationships between complex variables (can be recursive and not recursive), involving higher order components (factors) and multigroup comparisons. Tenenhaus (2008) found that GSCA is a new method of component-based SEM that can be applied to very small samples. In addition, GSCA can be used in structural models involving variables with reflective and/or formative indicators.

This research involved a number of manufacturing companies registered in the Indonesia Stock Exchange in 2008–2015 period. The units of analysis involved in this study were manufacturing companies chosen from the data provided by the Indonesian Capital Market Directory. This research sampling was conducted using a purposive sampling method, which is the formation of samples from a population based on certain criteria. The purposive sampling method was selected because the objectives of this research can only be achieved if the samples of companies are used with the following criteria listed on the Indonesia Stock Exchange in 2008–2015; does not have negative equity and does not replace its business segment; presents a profit and loss statement that reflects profitability (no loss); have at least distributed dividends during the 2008–2015 period. Based on these criteria, 33 companies were selected in this research. The data obtained in this research were secondary data, consisting of time-series data (data that were collected several times within a certain period of time), and cross-sectional data (data collected within one period of time).

There are three research variables that were measured in this study: profitability, capital structure, and corporate value. Those variables were then classified into two groups: main variables, referring to independent variables (extern) and dependent variables (intern). Those variables are briefly described as follows. Profitability refers to corporate capability in earning profit out of sales, total asset, and equity. It also refers to the corporate capability in earning profit and measuring the operational efficiency and the efficiency in utilizing the asset. In this research, corporate profitability was a latent variable (X1) that consisted of three indicators. Indicators under profitability variable include: return on investment (ROI) and ROE, and net profit margin (NPM). Capital structure is the proportion between debt and equity (common stocks, preferred stocks, and retained earning) reported in yearly financial report. In this research, capital structure was a latent variable (Y1) that consisted of three indicators. Capital structure is identified by the following indicators: short-term debt to total assets (STDTA), long-term debt to total assets ratio (LTDTA), debt-to-equity ratio (DER). Corporate value refers to investors' perception regarding the rate of corporate success in managing the resources in the past, present and corporate prospect in the future as reflected upon the stock price in the market. In this research, corporate value was a latent variable (Y2) that consisted of two indicators. Corporate value can be measured through the following indicators: Tobin's Q , price earning ratio (PER).

4. The results of data analysis

The descriptive statistical test results will explain the five research variables. Profitability variables are measured based on three indicators, namely, ROI, ROE and NPM. The overall ROI for a period of five years is 0.124 or 12.40 percent, meaning that the average manufacturing company that is able to produce a ROI that is sampled over a period of five years is 12.40 percent. The overall average ROE over a period of five years is 0.201 or 20.10 percent, meaning that the average manufacturing company that is able to produce a return on its own capital that is sampled over a period of five years is 20.10 percent. The overall NPM for a period of five years is 0.113 or 11.30 percent, meaning that the average manufacturing company that is able to produce a profit rate on sales that is sampled over a period of five years is 11.30 percent.

Asset structure in this study was measured using two indicators, namely, current asset to total asset (CATA), and fixed asset to total asset (FATA). Overall CATA as a whole for a period of five years amounted to 0.581 or 58.10 percent. Meanwhile, the average FATA as a

whole for a period of five years amounted to 0.327 or 32.70 percent, meaning that the average manufacturing company invested funds of 32.70 percent in fixed assets of the total assets owned by the company.

Capital structure variables are measured using three indicators, namely, STDTA, LTDTA and DER. Overall STDTA over a period of five years amounted to 0.262 or 26.20 percent, meaning the average comparison between short-term debt and the company's total assets in manufacturing companies being sampled for a period of five years was 26.20 percent. However, the average LTDTA as a whole for a period of five years amounted to 0.141 or 14.10 percent, meaning the average comparison between long-term debt (long term debt) and total assets of companies in manufacturing companies the sample for a period of five years was 14.10 percent. Overall DER over a period of five years amounted to 0.900 or 90 percent, meaning the average comparison between total company debt and the amount of capital or equity of a company in a manufacturing company that is sampled over a period of five years is 90 percent.

Dividend policy variables are measured using two indicators: dividend payout ratio (DPR) and dividend yield (Div Yield). The overall DPR over a period of five years is 0.225 or equal to 22.50 percent, meaning that the average dividend per share with profit per share in a manufacturing company is sampled over a period of five year is 22.50 percent. The overall dividend yield (Div Yield) over a period of five years is 0.044 or 4.40 percent, meaning that the average dividend per share with the stock price at closing in a manufacturing company sampled over a period of five years is 4.40 percent.

Company value is measured by using two indicators, namely Tobin's Q (TQ), and PER. The overall Tobin's Q (TQ) for a period of five years is 1,852 times, meaning that the average value of the company is 1,852 times the average of the book value of equity. The average PER in manufacturing companies as a whole sample over a period of five years is 10,971, meaning a comparison between market price per share and earnings per share (earnings per share) the manufacturing companies that were sampled over a period of five years amounted to 10,971 times.

Goodness of fit model was employed to measure the capability of extern variables (exogenous variables) in explaining the variety in the intern variable (endogenous variable). In the other words, the model measured the overall contribution of GSCA toward the intern variables (endogenous variable). There were two indexes of the goodness of fit in GSCA analysis: Fit and Afit. The GSCA analysis resulted in Fit value of 0.673. This value indicates that profitability, asset structure, capital structure and dividend policy give 67.30 percent contribution to the corporate value. Meanwhile, the remaining 32.70 percent was a contribution of other variables (other than profitability, asset structure, capital structure and dividend policy) outside this research focus on corporate values (Figure 2).

The data analysis resulted in path coefficient value of -0.800 (see Table I), with critical ratio (CR) $21.62^* > t$ -table (2.00), probability value (p) 0.000 or the probability value being smaller than alpha 5 percent ($p < 0.05$). This result indicates that the profitability

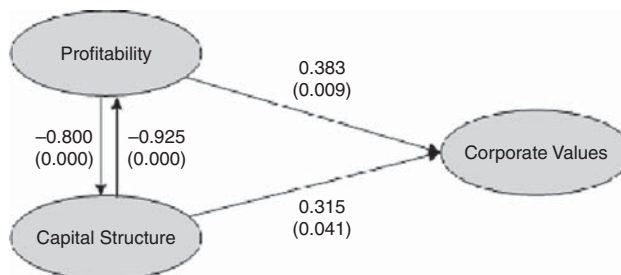


Figure 2.
The result of path
coefficient

significantly correlates with capital structure. The direction of the correlation is negative, which implies that the higher the profitability, the weaker is the capital structure.

The data analysis resulted in path coefficient value of -0.925 , with $CR\ 28.91^* > t\text{-table}\ (2.00)$, probability value (p) 0.000 or the probability value being smaller than alpha 5 percent ($p < 0.05$). This result indicates that the capital structure significantly correlates with corporate profitability. The direction of the correlation is negative, which implies that the stronger the capital structure, the weaker is the profitability.

The data analysis resulted in path coefficient value of 0.383 , with $CR\ 2.66^* > t\text{-table}\ (2.00)$, probability value (p) 0.009 or the probability value being smaller than alpha 5 percent ($p < 0.05$). This result indicates that the profitability significantly correlates with corporate value. The direction of the correlation is positive, which implies that profitability has a positive and significant correlation with corporate value.

The data analysis resulted in path coefficient value of 0.315 , with $CR\ 2.06^* > t\text{-table}\ (2.00)$, probability value (p) 0.041 or the probability value being smaller than alpha 5 percent ($p < 0.05$). This result indicates that the capital structure significantly correlates with corporate value. The direction of the correlation is positive and significant, implying that empirically, stronger capital structure improves the corporate value of manufacturing companies in Indonesia.

5. Discussions

5.1 *The influence of profitability on capital structure*

H1, which states that profitability significantly influences the capital structure, is accepted. The direction is marked by negative sign, meaning that any changes upon the profitability might lead to changes in the capital structure. The higher the profitability, the weaker is the capital structure. Improvement in corporate profitability improves the supply of internal fund in the form of retained earning, which at the same time lessens the amount of debt in the capital structure. The result of this research supports Titman and Wessels (1988), who found that profitability is able to decline the capital structure, and it can also give negative influences on capital structure. Companies with high profitability have adequate internal fund and they have less necessity to make investment using extern fund (Schoubben and Hulle, 2004). As stated in the research, it is predicted that profitability negatively correlates with capital structure. Jorgensen and Terra (2003) strengthened this view by providing evidence which shows that profitability decreases the corporate capital structure and it negatively influences the capital structure. Corporate profitability can also be sued to measure the capability of a company in making profit from the total asset used in corporate operational activities. The level of profitability reflects company's efficiency in utilizing its assets.

The ability of a company in improving its profitability from its operational activities is the main focus in assessing company achievement. Higher profitability reflects higher efficiency in utilizing corporate assets for corporate operational activities. Companies with high profitability use fewer amount of debt compared to companies with relatively low profitability. The use of internal fund from corporate profit enhances the corporate capital structure. The DER, which is the ratio between debt and the use of equity, is likely to improve within this condition, decreasing the dependability upon debt.

Correlation	Estimate	SE	CR	Prob.	Note
Profitability → capital structure	-0.800	0.037	21.62*	0.000	Significant
Capital structure → profitability	-0.925	0.032	28.91*	0.000	Significant
Profitability → corporate value	0.383	0.144	2.66*	0.009	Significant
Capital structure → corporate value	0.315	0.153	2.06*	0.041	Significant

Table I.
The result of path
coefficient prediction

Corporate profit basically reflects the fundamental financial condition of a company. The greater the corporate profit or the better the fundamental financial condition indicated by higher profitability, the greater is the amount of internal fund available in the form of retained earning, which finally decreases the proportion of debt within the corporate capital structure. In this context, profitability gives negative influence on capital structure.

The result of this research indicates that most manufacturing companies in Indonesia apply the pecking order theory, in which manufacturing companies tend to use higher proportion of internal fund (retained earning) in running their enterprises. Only when the internal fund is considered inadequate, extern fund will be used within certain order, starting from debt up to the emission of new shares as the last option. This finding of this research goes consistently with the pecking order theory (Myers, 1984), which states that the ideal order of fund fulfillment should start from the internal source in the form of the retained earning, debt, and new right issue as the last option. Companies with higher profitability tend to use fewer amount of debt compared to companies with low profitability, for companies with high profitability allocate adequate amount of their internal fund in the form of the retained earning to finance their activities.

5.2 The influence of capital structure on corporate profitability

H2, which states that capital structure significantly influences corporate profitability, is accepted. This correlation is negatively directed, meaning that any changes upon capital structure trigger changes in the profitability. The negative direction implies that higher capital structure decreases the profitability. The result of this research supports the previous research finding of Hadlock and James (2002), who explored the influence of capital structure on profitability. The result of this research shows that the use of debt to fund corporate operational activities requires company managers to anticipate a higher rate of return.

Capital structure mainly deals with fund sources, whether it comes from the internal source or external source. Internal fund source is a source of fund from corporate profit. Meanwhile, extern fund can be obtained from creditors. The higher the proportion of debt in the capital structure, the higher is the responsibility that should be taken by a company, for it has to pay the debt installment and the debt interest. The amount of debt interest reduces the corporate profit and decreases the corporate profitability. This finding goes in line with Abor (2005), who conducted a research on this issue, whose result shows that the LTDTA negatively influences the ROE.

5.3 The influence of profitability on corporate value

This research has found a significant influence of profitability on corporate value. This finding matches the prediction of *H3* in which it is predicted that profitability significantly correlates with corporate value. In other words, this finding shows that, empirically, corporate profitability is a determinant upon the corporate values of manufacturing companies in Indonesia.

The finding of this research is similar to the one found by Soliha and Taswan (2002) and Sudarma (2004), who found the evidence that profitability has a positive and significant influence on corporate value. This result also supports Nagano (2003), who stated that companies tend to use internal fund from the corporate profitability than using extern fund in improving the corporate value. In addition, Mardiyati *et al.* (2012) confirmed the positive influence of profitability on corporate value.

The direction of this correlation is positive, showing that any factor related to corporate profitability shares a positive and significant influence on corporate value. This positive sign indicates that, empirically, improvement in profitability enhances the corporate value of manufacturing companies in Indonesia. Profitability itself is a factor that determines

the level of corporate value, for profitability is corporate ability in making profit out of asset management and sales.

Investors can also use corporate profitability as an indicator of the future prospect of the company to decide whether or not they should make investment (signaling theory). High profitability is the reflection of excellent efficiency. Higher profitability increases the amount of internal fund. The result of this research indicates that in the empirical context, profitability is a variable that can be used to determine or to predict the values of manufacturing companies in Indonesia.

5.4 *The influence of capital structure on corporate value*

The influence of capital structure on corporate value has been found significant. This result matches *H3*, which predicts that capital structure significantly influences the corporate value. This finding provides empirical evidence that capital structure is the determinant of the corporate value of manufacturing companies in Indonesia.

The path coefficient of the capital structure is positive, showing that capital structure has a positive and significant influence on corporate value. It implies that higher amount of debt in the capital structure improves the corporate values of manufacturing companies in Indonesia. This phenomena occurs because higher debt in the capital structure apparently reduces the amount of tax to be paid and decreases the amount of debt interest, which positively affects the stock price in the stock market and eventually improves the corporate value.

The finding of this research matches the theory of financial decision proposed by Modigliani and Miller (1963), which stated that the use of debt to finance a company improves the corporate value, for it reduces the tax obligation and decreases the debt interest. This finding also supports Itturriaga and Rodriguez-Sanz (2001), who found evidence that capital structure positively influences corporate value. Wolfgang *et al.* (2006) also found that capital modal improves corporate value. However, Chien *et al.* (2010) provided empirical data that any changes upon the debt ratio affect the corporate value, either positively or negatively.

The result of this research also supports the pecking order theory and the asymmetric information, stating that in order to prevent any negative perspective from investors, the order of financial use in the capital structure should be retained earning, debt and new right issue. The use of debt in capital structure usually receives positive responses from investors, for it positively influences the stock price, which eventually improves the corporate value. If a company finances its operational activities through share issuance, investors will respond negatively, for the share issuance is not considered a good thing by the existing shareholders. New share issuance to fulfill the fund necessity increases the number of shares in a company, which results in the decrease in the share value and triggers share dilution, eventually leading to a lower stock price in the market. Therefore, the use of debt in capital structure will be positively perceived by the investors since it gives a positive influence on the stock price and it improves the corporate value.

5.5 *Research contribution*

The result of this research shows that profitability has a negative significant influence on capital structure, indicating that profitability is a determining factor upon the corporate capital structure. This finding also implies that the improvement in profitability in the forms of ROI, ROE and NPM triggers decrease in the proportion of debt within the capital structures of manufacturing companies registered in BEI or Indonesia Stock Exchange. This result also shows that the financial pattern applied by manufacturing companies registered in BEI is adapted from the pecking order theory, which means that the companies show a higher tendency in using intern fund (retained earning) as the first option in financing their operational activities. When companies consider the intern fund as

inadequate, then extern fund will be used with the debt at the first choice and share emissions as the last option.

The practical implication of this finding is the availability of asymmetric information in Indonesia stock exchange (BEI), which is also a normal phenomena that usually occurs in emerging market. Therefore, any decision related to the capital structures of manufacturing companies registered in BEI is made on the basis of the pecking order theory. Thus, decisions on the determination of capital structure composition should regard the trade-off between the profit and the cost that appears from the debt proportion in the capital structure, for the debt might also reduce the amount of tax liability and decrease the amount of debt interest, which finally improves the corporate value.

The finding of this research also shows that profitability has a positive and significant influence on corporate value. This result also indicates that profitability is a factor that predicts the corporate values of manufacturing companies listed in BEI. Basically, profitability reflects corporate financial condition. The higher the profitability, the higher is the amount of intern fund from the retained earning, decreasing the proportion of debt in the capital structure. It is clear that profitability has a positive correlation with corporate value.

The finding of this study also indicates that the financial system applied in companies in Indonesia is based on the pecking order theory (Myers and Majluf, 1984), in which manufacturing companies in Indonesia prefer using intern fund (retained earning) in funding their operational system. Extern fund is only used when the intern fund is considered inadequate, and they tend to use debt as the preferred choice and right issue as the last option. This result is consistent with the pecking order theory (Myers, 1984), which states that the intern fund in the forms of retained earning is the first option, followed by the debt and right issue. Thus, companies that have high profitability are likely to use a lesser amount of fund from the debt compared to the companies with high profitability, since companies with high profitability have a higher amount of internal fund (retained earning), which is used to fund the corporate operational activities.

This research also shows that capital structure significantly and positively influences corporate value. The finding also indicates that capital structure is a determinant that can be used to predict corporate value. The finding of this research supports Modigliani and Miller (1963), who stated that fund from debt improves the corporate value, since there will be higher tax shield from installment liability. This research finding also clarifies the application of capital structure theory using the trade-off model through MM approach, which states that the use of certain amount of debt at a certain level improves the corporate value, for it results in more tax savings. However, the use of debt beyond the optimal limit decreases the corporate value, since it triggers financial distress and agency costs greater than the tax savings. The result of this study is also similar to Itturriaga and Rodríguez-Sanz (2001), who found clear evidence that capital structure positively influences corporate value. Similarly, Chien *et al.* (2010) also found that any changes in the debt ratio will influence the level of corporate value, either positively or negatively.

This research supports the pecking order theory and the asymmetric information, which state that in order to prevent investors from having negative perception, companies should use the fund in order, starting from the use of the retained earning, debt, and right issue. The presence of debt in the capital structure will create positive responses from the investors, for it positively influences the stock price, eventually improving the corporate value. Right issuance used to fund corporate operational activities will draw negative responses from the investors, especially old shareholders. Right issuance done to fulfill the fund necessities also increases the number of shares, which later decreases the earning per share and declines the stock price. Therefore, the presence of debt in the capital structure will receive positive responses from the investors. Besides, it positively influences the stock price that eventually improves the corporate value.

The results of this study can be used as a basis for increasing company profitability and a predictor as whether profitability can be used as a determination of the size of the capital structure. As for investors, the results of this study can be used as a consideration in making investment decisions in the capital market.

6. Conclusions and suggestions

There are some conclusions drawn from the result of this research. Corporate profitability significantly influences capital structure in a negative direction. It implies that companies with high profitability tend to use a lesser amount of debt compared to companies with low profitability. This finding supports the pecking order theory (Myers, 1984), which stated that corporate fund should be used in order, starting from the use of internal fund (retained profit), debt and right issuance as the least preferred option. The result of this research also shows that manufacturing companies registered in BEI tend to use the internal fund (retained profit) to fund their operational activities. Capital structure significantly and negatively influences corporate profitability, which implies that higher capital structure decreases the profitability. This result supports the finding of a previous research done by James *et al.* (2002), who explored the influence of capital structure on corporate profitability. It is stated that corporate debt makes the managers anticipate higher rate of return. Capital structure is basically related to fund sources, whether the fund comes from internal source or from extern source. Internal fund is the corporate fund obtained from the corporate earnings, whereas external fund comes from creditors. A higher debt proportion in capital structure creates greater fixed liabilities in the forms of debt installment and debt interest that should be paid by a company. The amount of interest that should be paid by a company reduces the earning and decreases the profitability. The finding of this study also shows that profitability has a significant influence on corporate value. This finding has also provided an empirical evidence that profitability is the determinant of corporate values in manufacturing companies in BEI. The result of this research also indicates that in empirical context, profitability can be used as an indicator to determine or predict stock price and corporate value. Companies prefer using internal fund from the profitability than using extern fund in improving their corporate values. Capital structure significantly influences the corporate value. The finding of this research is in accordance with the theory of financial decision proposed by Modigliani and Miller (1963), which states that financing the corporate activities using debt improves the corporate value, for it provides tax savings out of debt interest, and the agency theory, which believes that the goal of corporate management is to maximize the value obtained by shareholders and to improve the corporate value through capital structure. An evidence found by Itturriaga and Rodríguez-Sanz (2001) showed that capital structure positively influences the corporate value.

With regard to the results of the data analysis, the following recommendations have been drawn: corporate profitability, which consists of ROI, ROE and NPM, can be used as the indicators in predicting the stock price and measuring corporate value. Thus, it is suggested that corporate managers should include the corporate profitability in making any financial decisions in their attempts to increase the stock price and improve the corporate value. Investors are also recommended to include the movement of corporate profitability in analyzing the corporate stock price. This research has also found an indication that manufacturing companies registered in BEI tend to apply the pecking order theory, in which they use their intern fund (retained earning) as the most preferred financial source to fund their operational activities. It is also suggested that company managers should strengthen the position of the corporate capital structure by carefully determining the ratio of corporate earning to be re-invested to reinforce the position of the corporate capital structure.

Practically, there are several considerable implications that can be taken from this research. First, the findings of this research can be used as a consideration for investors in

making investment decisions (especially investments in the financial sector), including those related to the factors influencing the market prices of corporate stocks. Second, the findings of this research can also help investors to make decisions about which company is feasible to be selected as a place to invest. The increase in the number of investors playing in the capital market will lead to more enthusiastic capital markets. Furthermore, stock exchange beneficiaries as a place to get fund sources will be more desirable by companies or issuers.

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Further reading

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