THE INFLUENCE OF CAPITAL STRUCTURE
ON PROFITABILITY AND FIRM VALUE
(A Study on Food and Beverage Companies listed in Indonesia Stock Exchange 2010-2012 period)

Shinta D. Manurung
Suhadak
Nila Firdausi Nuzula
Faculty of Administrative Science
Brawijaya University
Malang
Email: shinta.dewilina@gmail.com

Abstraction

This research is conducted to enhance the knowledge about capital structure, profitability, and firm value. In this research, the capital structure is represented by three indicators: Debt Ratio, Debt Equity Ratio, and Long Term Debt to Equity. Profitability is examined by Return on Asset, Return on Equity and Net Profit Margin, while firm value is proxy by Book Value, Price to Book Value, and Closing Price. Using Partial Least Square Method, this study finds that all indicators are useful to measure the latent variables. While in the analysis of structural model or inner model, the result supports Hypothesis 1 that capital structure has negatively significant influence on firm value. The higher the debts that firms employed, the lower its values. This study also supports Hypothesis 2 that capital structure influences the profitability significantly. This indicates that firms with high capital structures will have a decrease in profit. The result of the research also supports Hypothesis 3 that profitability influences the firm values positively. It means that higher profitability of a firm will result in a higher firm value.

Key words: Capital Structure, Profitability, Firm Value

INTRODUCTION
A. Background

Finance is the significant factor that assists in the formation of new businesses, and allows businesses to take advantage of opportunities to grow, to expand or innovate further. As the old proverb says it takes money to make money, the firm sure will need to buckle down and spend money in order to operate. In the language of finance, the business should make investments in assets such as inventories, machineries, lands and labors, in order to generate cash.

Before a firm can invest in an asset, it must decide whether financing the asset by using debt or equity, or mix of these two sources. The mixture of debt and equity is called capital structure (Brigham and Daves, 2004). Capital structure has become such a great interest in the corporate finances studies. For more than fifty years since Modigliani and Miller's capital structure paper in 1958, academicians have conducted various researches in the field of capital structure.

Modigliani and Miller stated that the choice between debt and equity financing has no material effects on the firm value if there is no taxes, no brokerage costs, no bankruptcy costs, and investors have the same information about a firm's prospects as managers.

This theory seems to be unreasonable in the real world since taxes, brokerage costs, bankruptcy costs, differences in borrowing costs, and information asymmetries exist in the real world. To that respect, many researchers then argue Modigliani and Miller's theory by adding omitted assumptions, thus showed different results.

All of the studies have provided the evidence that capital structure does affect profitability and firm value, and profitability affect firm value. However, the analysis over the influence of capital structure, profitability, and firm value in one single research is very limited. An opportunity to perform additional research among those variables is open in the form of replication and development. This research is performed to investigate the influence of capital structure on profitability and firm value of Food and Beverage Companies listed in Indonesia Stock Exchange during 2010-2012.

According to Statistics Indonesia (BPS-*Badan Pusat Statistik*), Food and Beverage Companies provided largest contribution to Indonesian Gross Domestic Products during 2010-2012. Besides,

the companies also have capital-intensive characteristic that is suitable for this research. According to Indonesian stock exchange statistics, food and beverage companies have largest investment on assets in consumer goods industry from 2010-2012.

Based on the reasons above, it is appropriate to study *"The Influence of Capital Structure on Profitability and Firm Value (A Study on Food and Beverage Companies listed in Indonesia Stock Exchange 2010-2012 period)"*.

B. Formulation of Problem

Following the backgroun, this study aims to answer these questions below:
1. Does capital structure have a significant influence on firm value?
2. Does capital structure have a significant influence on profitability?
3. Does profitability have a significant influence on firm value?

THEORETICAL REVIEW
A. Capital Structure

1. Definition of Capital Structure

Capital Structure is the proportion of debt financing and equity financing in firms. The difference of equity financing and the debt financing is in the ownership. In equity financing, investors become the owner of a firm and shares any profit. However, debt financing is not giving up ownership since it is literally just borrowing money. Debt financing also comes with strict conditions to pay interest and principal at specified dates.

2. Theory of Capital Structure

The theory of modern business finance starts with the Modigliani and Miller (1958:261-297) capital structure irrelevant paper. MM theory was based on the strong assumptions include no brokerage costs, no taxes, no bankruptcy costs, and no asymmetric information. Modigliani and Miller have famously demonstrated that under those specific set of assumptions, the capital structure of the firm does not affect its value. This finding has been subsequently overturned due to the unrealistic nature of its assumptions. In their correction paper on 1963, Modigliani and Miller had identified that as the level of gearing increases by replacing equity with cheap debt, the level of the Weighted Average Cost of Capital (WACC)

drops and an optimal capital structure does indeed exist at a point where debt is 100%. MM Theory then stimulated serious researches devoted to disproving those irrelevances. As a result, trade-off theory, pecking order theory and agency theory were born.

Trade-off theory posits that firms choose their capital structure by balances the costs and benefits of debt financing. The costs of debt financing include the potential for costly bankruptcy and agency conflicts, while the benefits include the tax advantage of interest payments. This trade-off implies the existence of a target leverage that maximizes the value of the firm (Abdeljawad et al., 2013).

The pecking order theory has emerged as an alternative theory to trade-off theory. The key assumption of the pecking order is asymmetric information. In pecing order theory, managers will follow the pecking order by using internally generated funds over external financing. If firms require external funding they would choose debt over equity.

In agency theory, it is assumed that the principal and the agent are motivated by self-interest. This assumption of self-interest is more likely to cause conflicts thus raising an agency costs. An optimal relationship between the principal and the agent is reached if the agency costs that occured is minimal. Agency theory predicts that lower agency costs imply a higher firm value.

B. Profitability

Profitability can be defined as the ability of a firm to generate profits. Sarngadharan & Rajitha (2011:130) differentiate profit from profitability based on how it measure the earning capacity, in which profit is an absolute measure of earning capacity but profitability is a relative measure of earning capacity. In other words, profit indicates a firm's earning during a specified period. While, profitability denotes whether these profits are constant or improved or deteriorated, how and to what extent they can be improved. That is why profits of two different firms might be identical, however not for the profitabilities.

Profitability is the most important factor for managers (Bititci et al.: 2009). Firms with high profitability level are more likely to have better performance. Putting profitability measurement systems in place can be an important way of keeping track on the progress of the firm by

giving vital information about what is happening now, but also enables firm to achieve growth.

C. Firm Value

For shareholders point of view, the value of firm can be defined as the amount of utility/benefits derived from the shares (Rashid and Islam, 2008:2). Maximizing firm value is more than a long term goal. Rather, it should be on the managers' priority. As Salvatore (1989:11) explained, the primary goal or objective of a firm is to maximize wealth or the value of the firm.

Shareholders measure the feasibility of their investment from the share price (Hall and Lowies, 2010), thus, maximizing firm's value also maximizes the wealth of the shareholders. Since investor would not pay for less worth investment, they are always tried to assess whatever they are buying (Damodaran, 2011:1). Investors come to the market with a wide range of investment philosophies. Some investors are market timers looking to buy before market upturns, while others believe in picking stocks based on growth and future earning potential. Some invest for short-term profits and other for long-term gains.

RESEARCH METHOD

Given that this research is seeking to understand the influence of capital structure on profitability and firm value, it is appropriate to adopt an explanatory research. Explanatory research is aims to explain events and examines causal relationships between variables. This study collected data such as financial statements and Indonesian Capital Market Directory from Indonesia Stock Exchange (IDX).

There are two types of variables used in this research. The first is exogenous variables and the second is endogenous variables. According to Barro (2008:8), the exogenous variables are the ones that is given, while endogenous variables are the one that a model wants to explain. Referring to this definition, this study explains how exogenous variables affect the endogenous variables. The variables in this research are as follow:
1. Exogenous variables (X) in the form of Debt Ratio, Debt Equity Ratio, and Long Term Debt to Total Equity.
2. Endogenous variables (Y_1) in the form of Return on Assets, Return on Equity, and Net Profit Margin.
3. Endogenous variables (Y_2) in the form of Book Value, Price to Book Value and Closing Price.

The population of the research is all food and beverage companies listed in Indonesia Stock Exchange (IDX) during 2010-2012. Samples are collected from the population using purposive sampling. In order to answer the research questions, the writer establish certain criteria that should be met in performing the research. The criteria applied to select the samples are:
1. Food and beverage companies listed in Indonesia Stock Exchange during 2010-2012.
2. Food and beverage companies that published financial statement ended on December 31.
3. Food and beverage companies that scored profits during 2010-2012.

Based on those criteria, this study uses 15 firms as samples.

This study tests hypotheses by Partial Least Squares (PLS) approach. Partial Least squares (PLS) is a variance-based approach also known as component-based approach used for testing structural equation models. It is also known as a soft modeling technique which does not require a normal distribution assumption (Ghozali, et al. 2012).

CONCEPTUAL FRAMEWORK AND HYPOTHESIS

Below is the conceptual framework applied as a guide for developing hypotheses, and the framework for hypotheses testing.
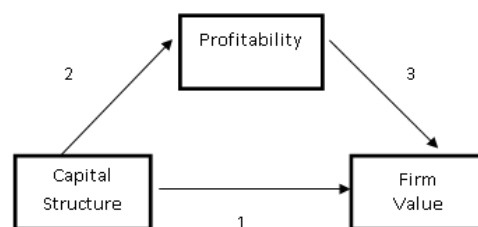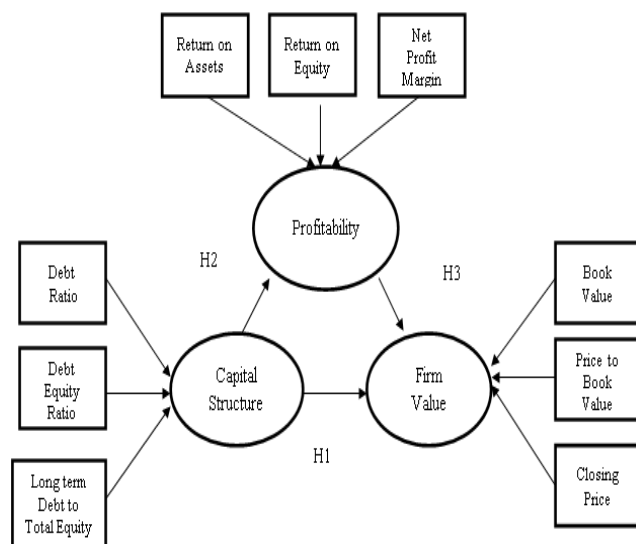

Figure1. Conceptual Framework

Figure 2. Hypothesis Framework

Hypothesis 1 : Capital Structure has a significant influence on Firm Value.

Hypothesis 2 : Capital Structure has a significant influence on Profitability.

Hypothesis 3 : Profitability has a significant influence on Firm Value

RESULT AND DISCUSSION

### A. Stage One- Assessing The Measurement Model (Outer Model)

In the first stage, the writer measures the validity and reliability of the indicators by using Confirmatory Factor Analysis (CFA). The purpose of assessing the measurement model or outer model is to specify which measurement items are related to each latent variable. If the indicator weights are not significant then the indicator is not valid and vice versa.

1. Indicators of Capital Structure Construct

Capital structure is measured by using three indicators: Debt Ratio (DR), Debt Equity Ratio (DER), and Long Term Debt to Total Equity (LTDE). Table 1 and Figure 3 present the outer weight of each indicator in capital structure.

Table 1: Assessment of indicators on Capital Structure

Capital Structure	Indicator Weights	P value
X_1 DR	0.346	<0.001
X_2 DER	0.355	<0.001
X_3 LTDE	0.337	<0.001
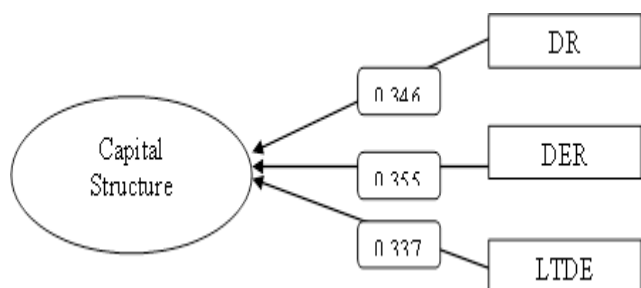
Figure 3: Indicators weight of Capital Structure

Based on table 1 and Figure 3, DR, DER and LTDE have path coefficient of 0.346, 0.355, and 0.337 respectively. All indicators are also significant at p value <0.001. These results indicate that DR, DER, and LTDE are valid indicators to form capital structure. This result also means that high capital structure will be formed by having higher debt ratio, debt equity

ratio and long term debt to total equity. In other side, firms with low debt ratio, debt equity ratio, and long term debt to total equity will also have a low capital structure. Thus, high capital structure shows that the external financing or debt financing is used to fulfill the need of capital.

2. Indicators of Profitability Construct

Profitability is measured by using three indicators: Return on Asset (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). Table 2 and Figure 4 show the outer weight of each indicator in profitability.

Table 2 : Assessment of indicators on Profitability

Profitability	Indicator Weights	P value
$Y_{1.1}$ ROA	0.404	<0.001
$Y_{1.2}$ ROE	0.363	0.002
$Y_{1.3}$ NPM	0.347	<0.001
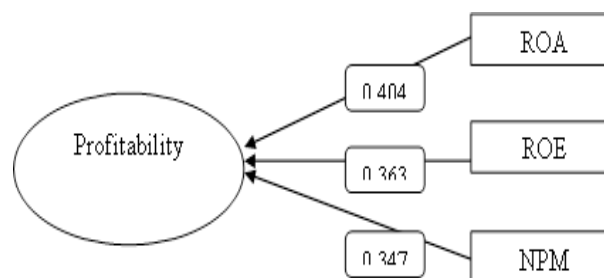
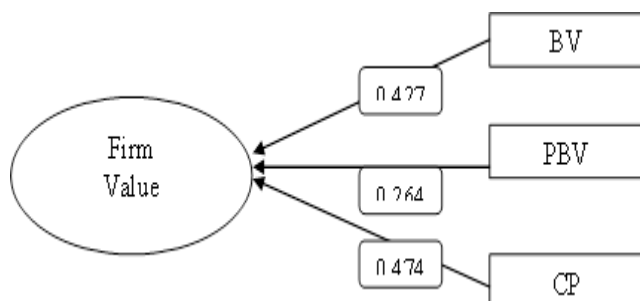**Figure 4: Indicators weight of Capital Structure**

Based on table 2 and Figure 4, ROA and NPM have indicator weights of 0.404 and 0.347 respectively with p value significant at <0.001. This means that ROA and NPM can be used to form profitability. ROE has indicator weight of 0.363 with p value 0.002 < 0.05 (5% significant), it means that ROE is also a valid indicator in forming profitability. This result indicates that ROA, ROE, and NPM can be used to proxy profitability. Firms with high ROA, ROE, and NPM perform higher rather than those with low ROA, ROE, and NPM.

3. Indicators of Firm Value

Firm value is measured by using three indicators: Book Value (BV), Price to Book Value (PBV), and Closing Price (CP). Table 3 and Figure 5 present the outer weight of each indicator in firm value.

Table 3 : Assessment of indicators on Firm Value

Firm Value	Indicator Weights	P value
$Y_{2.1}$ BV	0.427	<0.001
$Y_{2.2}$ PBV	0.264	0.025
$Y_{2.3}$ CP	0.474	<0.001

Figure 5: Indicators weight in Capital Structure

Based on table 3 and Figure 5, BV and CP have indicator weights of 0.427 and 0.474 respectively with p value significant at <0.001. This means that BV and CP can be used to form firm value. In addition, PBV is also a valid indicator to measure Firm Value because it has path indicator weight of 0.264 and p value of 0.025 which is lower than 0.5 (5% level of error). This result indicates that the value of a firm will be determined by its BV, PBV, and CP. The higher the BV, PBV, and CP will have an impact on increasing the firm value. Conversely, firms having low BV, PBV and CP will also have a low firm value.

In the first stage of measurement model, the indicators were assessed using confirmatory factor analysis in measuring the latent variables. All indicators proved to be significant in measuring the latent variables. With satisfactory result of confirmatory factor analysis, the next stage is to perform the analysis of the structural model, in order to determine the explanatory power of the proposed model and to test the research Hypothesis in this research.

B. Stage Two- Assessing the Structural Model

The structural model aims to specify which latent variables directly or indirectly influence the values of other latent constructs in the model. The structural model in PLS-SEM is assessed by examining the explanatory power of the structural model and the path coefficient.

1. Coefficient of Determination, R^2

Coefficient of determination is the degree or the amount of variation of endogenous variable accounted by the exogenous variable. Figure 6 shows the R^2 value for firm value is 0.58 and the R^2 value for profitability is 0.27.
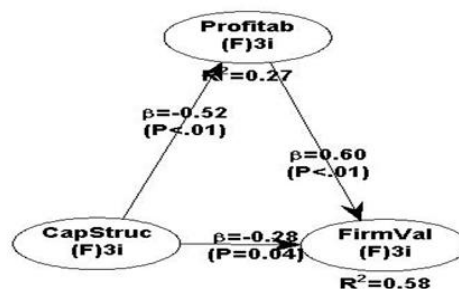
Figure 6: Direct Relationship Path Diagram

This result means that firm value is influenced by capital structure and profitability by 58%. In other side, profitability is influenced by capital structure by 27%.

2. Hypothesis testing

The result of hypothesis testing can be seen form the path coefficients and P values on Figure 6 and Table 4.

Table 4: P Values and Path Coefficient

	Path Coefficients	P Values
Capital Structure-> Firm Value	-0.281	0.037
Capital Structure-> Profitability	-0.523	0.005
Profitability-> Firm Value	0.600	<0.001

a. Hypothesis 1: Capital structure has significant influence on firm value

Based on the above findings, it can be concluded that the finding supported Hypothesis 1 by path coefficient of -0.281 and p value 0.037 < 0.05 (5% level of error). It means that capital structure has a significant influence on the firm value. An optimal capital structure will have a strong influence to firm value. A negative path coefficient showed that the influence of capital structure on firm value is negative. It means that the higher the capital structure of a firm, the lower the value of the firm. The decreasing of firm value is caused by a high use of debt. Using debt in a

high proportion will increase the firm risk of unable to repay the interest and installment that will eventually cause a bankruptcy. High debt is also means a firm has a week internal financing and a week ability to finance investment. These will be seen as an indication that will decrease the firm value.

According to Static Trade-Off Theory, firms will have an optimum capital structure by balancing the tax advantage of borrowed money with the cost of financial distress. When firms rely too much on debt, it will result in an increasing the cost of financial distress. Firms that have too much debt, relative to their optimal level will result in the decreasing of firm value.

This result is consistent with Mariono (2012) that capital structure has significantly negative relationship with firm value. However, this result do not support the research conducted by Chowdhury & Chowdhury (2010) in which they find that capital structure has a strong positive correlation on firm value. This result is also supported the MM theory with tax that capital structure influence the firm value. However, Modigliani and Miller's opinion on using higher debt to increase the firm value is different with the result of this research because higher debt will decrease e the firm value.

b. Hypothesis 2: Capital structure has significant influence on profitability

The path coefficient of capital structure on profitability shows the value of -0.523 and p value of 0.005 < 0.01 (1% level of error). It can be concluded that there is a significant influence of capital structure on profitability, thus, accepting hypothesis 2. The negative path coefficient indicates that the higher the capital structure of a firm employed by having higher debt will decrease the profitability of a firm.

This negative relation of capital structure on profitability may be caused by the increasing level of the debt finance will increases the interest payment, thus resulting in a decline in profit. In addition to these, an increase in the level of debt also increases the riskiness of firms. Therefore, Food and Beverage firms should concern much on internal sources of financing in order to increase their profitability.

This result supported the research performed by Velnampy and Niresh (2012) and the research conducted by Shubita and Alsawalhah (2012) in which they stated that capital structure has a negative influence on profitability.

c. Hypothesis 3: Profitability has a significant influence on firm value

The influence of profitability on firm value showed a significantly positive relation with the path coefficient of 0.600 and significant at p value <0.001. This result supported hypothesis 3 in which profitability has significant influence on firm value. The positive path coefficient of profitability on firm value indicates that firms with higher profitability will be followed by the increasing of firm value. The reason of this relationship is because high profitability indicates the success of a firm. It will be seen as a benchmark for investors to invest their funds. High profitability will push the firm's stock market price to increase, thus, increasing the firm value. This result is consistent with the finding by Chen and Chen (2012) in which stated that profitability has a positive and significant effect to the value of the firm.

CONCLUSION AND RECOMMENDATIONS

Based on the discussion above, this study is conducted to analyze the influence of capital structure on firm value, the influence of capital structure on profitability and the influence of profitability to firm value. Analyzing those influences is crucial for firm because it provides firms with understanding on factors that they should put into considerations in order to achieve success. The conclusions and recommendations of this study are summarized as follows:

A. Conclusions

1. Based on the testing on hypothesis 1, it can be concluded that the result supported hypothesis 1 that capital structure has a significant influence on firm value. The significant result means that determining an optimal capital structure will give a strong influence on firm value. Negative path coefficient shows the influence of capital structure on firm value is negative. It means that the higher the capital structure of a firm, the lower the value of the firm. Debt ratio, debt equity ratio and long term debt to total equity were proved to be valid indicators to measure capital structure

while valid indicators to measure firm value are book value, price to book value and closing price.

2. Based on the testing on hypothesis 2, it can be concluded that capital structure has a significantly negative influence on profitability. It means that firms which have higher debt in which constructed by debt ratio, debt equity ratio, and long term debt to total equity will have lower profitability constructed by book value, price to book value and closing price.

3. Based on the testing on hypothesis 3, it can be concluded that profitability has a positive significant influence on firm value. The significant result means that profitability will give strong influence on firm value. The positive coefficient shows that the influence of profitability to firm value is linier. It means that higher profitability, in which constructed by return on assets, return on equity, and net profit margin will increase the value of the firm constructed by book value, price to book value, and closing price.

B. Recommendation

1. For the firm's management

In order to increase the firm value, management is expected to increase the profitability because higher profitability will be followed by having higher value as the finding of this research. The result stated capital structure has a negative influence on firm value can be used as a reference for the management in determining the capital structure by remembering that high debt will decrease the firm value.

2. For investors

The goal of investors is to invest their fund in investments that would really benefit them, thus investors should wisely choose investment that have a promising prospect. Based on the result of this research, firm with low debt and high profitability will increase its value. According to this finding, investors should invest in companies with lower debt and high profitability in order to increase the firm value that will eventually benefit the investors.

3. For the next researchers

Researcher that is interested in doing research on capital structure, profitability, and firm value should add more variables in order to better represent the construct. In addition, the next researcher can also adding external variables such as inflation and interest rate deliver a more accurate result

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