THE IMPACT OF CAPITAL STRUCTURE AND FIRM SIZE ON FINANCIAL PERFORMANCE

Jessica Zhou  
jessica.zhou97@gmail.com

Tanggor Sihombing  
tanggor.sihombing@uph.edu

ABSTRACT

This research aims to prove empirically the impact of financial factors related to financial performance which consist of capital structure and firm size to financial performance using return on asset, return on equity, and current ratio as measurements. The populations in this study are manufacturing companies listed on the Indonesia Stock Exchange in 2013-2017, as the observation was conducted in said time period. Purposive sampling used with a total sample of 32 companies with 5 years observation period for each company. Total asset, total liability, total equity, current asset, current liability, net income were taken from the companies’ annual report, assessed regarding to some criteria in the regulation and best practice. Data Analysis method used is multiple linear regression analysis. The results showed that capital structure and firm size simultaneously significant in affecting financial performance using return on asset, return on equity, and current ratio as measurements.

References: 23 (2002-2018)

Keywords: financial performance, capital structure, firm size, return on asset, return on equity
INTRODUCTION

Background

Nowadays a lot of companies compete to stay within their respective industries, they improve several factors such as their corporate governance, internal control, and financing method to beat their competitors. Their primary objective is to present their best financial reports and attract the investors, which means improvement of profitability. The presented profitability resembles how good the firm’s performance is.

Firm size is a measurement of how small or big the company is, larger companies tend to have larger amount of assets. With high level of the amount of total asset and sufficient investment, a company with high value of firm size is expected to produce high return or perform better in terms of profitability.

The purpose of the research is to look further in the impacts of capital structure and firm size due to the increasing amount of investment in Indonesia’s Stock Exchange which implies that capital and equity is available to use for financing, but the financial performance is not significantly improving, the amount of companies that suffer bankruptcy is still high such as in 2017, there are 8 companies that delisted from Indonesia Stock Exchange. Therefore, researcher will use debt ratio to measure capital structure and to measure the financial performance, this research will use return on asset ratio (ROA), return on equity ratio (ROE), and current ratio. Data used for this study will include manufacturing companies which are listed on Indonesia Stock Exchange 2013-2017.

Research Problem

To achieve the objectives of the research, writer define research problems as follow:

1. Does capital structure negatively affect financial performance of a company, using Return on Asset (ROA) as the measurement?
2. Does capital structure negatively affect financial performance of a company, using Return on Equity (ROE) as the measurement?
3. Does capital structure negatively affect financial performance of a company, using Current Ratio as the measurement?
4. Does firm size positively affect financial performance of a company, using Return on Asset (ROA) as the measurement?
5. Does firm size positively affect financial performance of a company, using Return on Equity (ROE) as the measurement?
6. Does firm size positively affect financial performance of a company, using Current Ratio as the measurement?

Research Objective

In composing the objective of the study, writer hold on to the problem statements. The following are the objective of the study:
1. Prove empirically that capital structure negatively affects financial performance of a company, with Return on Asset (ROA) as the measurement.
2. Prove empirically that capital structure negatively affects financial performance of a company, with Return on Equity (ROE) as the measurement.
3. Prove empirically that capital structure negatively affects financial performance of a company, with current ratio as the measurement.
4. Prove empirically that firm size positively affects financial performance of a company, with Return on Asset (ROA) as the measurement.
5. Prove empirically that firm size positively affects financial performance of a company, with Return on Equity (ROE) as the measurement.
6. Prove empirically that firm size positively affects financial performance of a company, with current ratio as the measurement.

Scope of the Study
The limitation of this study is the research used audited data which are taken from manufacturing companies in consumption goods sector for 2013-2017 with a total of 32 companies. There are several companies which writer exclude from the study due to incomplete financial report data, including 5 companies from food and beverages subsector, 3 companies from pharmacy subsector, 1 company from cosmetic and household subsector, and 1 company from houseware.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Basic Concept Definition

Modigliani & Miller Theorem
Merton Miller and Franco Modigliani published the irrelevance theory in 1958 stating that if markets are perfectly competitive, firm performance will not be related to capital structure, with assumptions of a perfectly competitive market that exclude the impact of tax, inflation and transaction costs related to raising money or going bankrupt. Then M&M issued a revision of their first theory. In the revised version, they considered tax benefits as determinants of capital structure. So, M&M imply that companies can increase value by increasing debt due to tax shield benefits relation to debt use, firms gain benefit by increasing leverage. M&M stated that firm value and firm performance is an increasing function of leverage due to the tax deductibility of interest payments at the corporate level (Modigliani & Miller, 1963).

Trade-off Theory
According to Kraus and Litzenberger (1973), the static trade-off theory assumes that firms trade-off the benefits and costs of debt and equity financing and find an optimal capital structure after accounting for market imperfections such as taxes, bankruptcy costs and agency costs.

Pecking Order Theory
According to Myers (1984), firms prefer internal sources of finance; they adapt their target dividend payout ratios to their investment opportunities although dividends
and payout ratios are gradually adjusted to shifts in the extent of valuable investment opportunities. Myers (1984) stated that if external finance is required, firms are most likely to issue the safest security first that is to say they start with debt then possibly convertible debt then equity comes as last resort.

**Financial Performance**

A firm’s financial performance, in the view of the shareholder, is measured by how better off the shareholder is at the end of a period than he was at the beginning and this can be determined using ratios derived from financial statements; mainly the balance sheet and income statement, or using data on stock market prices (Berger and Patti, 2002).

**Firm Size**

According to Sujoko and Ugy (2007:45), size of the company is the representation of how big or small the company is which being valued by the total amount of total asset at end of the year period, calculated by In of total asset.

**Capital Structure**

According to Modigliani and Miller, capital structure is a mix between debt and equity that a company uses in its operation. As financial capital is an uncertain but critical resource for all firms, suppliers of finance are able to exert control over firms (Harris and Raviv, 1991). According to Pandey (2001), a company’s capital structure refers to its debt level relative to equity on balance sheet, the formula is called as debt ratio, it is a snapshot of the amounts and types of capital that a firm has access to, and what financing methods it has used to conduct growth initiatives such as research and development or acquiring assets.

**Capital Structure and Financial Performance**

Taub (1975) in his research, found significantly positive relationship between debt ratio and measures of profitability. Nerlove (1968), Baker (1973) and Petersen and Rajan (1994) also identified positive association between debt and profitability but for industries. However, some studies have shown that debt has a negative effect on firm profitability. Fama and French (1998), for instance argue that the use of excessive debt creates agency problems among shareholders and creditors and that could result in negative relationship between leverage and profitability.

**Profitability**

Return on Asset is the measurement for the average return on investment to all investors regardless of their relationship to the company. The formula is net income divided by total asset. (Financial Accounting Theory and Analysis, page 539)

Return on Equity indirectly measures risk of failure by showing how much a firm earned for each dollar invested by its owners. The calculation of this return is by dividing net income to total equity. (Understanding Business, page 494)

**Liquidity**

Current Ratio is the ratio of a firm’s current assets to its current liability. To measure how good the performance of the company is, current ratio usually being
compared to the ratio of other companies or with the previous year ratio. (Understanding Business, page 492)

**Corporate Governance**

Corporate governance is about promoting corporate fairness, transparency and accountability (Glossary, 2013). While Adedotun (2003) mentioned that corporate governance is a framework for accounting for decision making, it is effective management relationship within the organization integrity to enhance firm performance for the benefit of all stakeholders.

**Literature Review**

The traditional theory of capital structure believes that a low weighted average cost of capital is the result of maximum mix of capital which may increase the market value per share significantly towards maximum point. Some theories agreed that performance equals to total market value of a company or total of equity’s market value and value of options from equity (Cole and Mehran, 1998; Merz and Yashiv, 2007). Others consider that company value as more than market capitalization, while considering the assets value of firm’s operation (Mehran, 1995; Ang et al., 2000; Allen et al., 2007). Previous studies resulted in a positive relation between short-term debt and total debt and performance but incurred negative impact from long-term debt to profitability expressed through return on equity (Abor, 2005). Chinese firms found a negative relation between leverage and performance, described by the ratio of earnings before interest and tax to total assets (Huang and Song, 2006; Chakraborty, 2010). According to Ebaid’s (2009), no significant impact was found between capital structure choices and financial performance.

This research is using relational relationship which means variables that being researched are connected to one another and have impact toward each other whether as independent and dependent or vice versa. Following are list of previous study done in relation with topic being researched by writer:

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<td>The Relationship between Capital Structure and Financial Performance in the Companies Listed in Abu Dhabi Securities Exchange: Evidences from United Arab Emirates</td>
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<td>Caroline Githire &amp; Willy Muturi, 2015</td>
<td>Effects of Capital Structure on Financial Performance of Firms in Kenya: Evidence from firms listed at The Nairobi Securities Exchanges</td>
<td>Multiple regression analysis</td>
<td>Equity and long-term debts positively and significantly affect performance of firms, while short term negatively and significantly affect firm performance which was measured using return on asset</td>
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<td>7</td>
<td>Liza Ramadhani, 2017</td>
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<td>8</td>
<td>Livia Angelica Wirawan, 2017</td>
<td>Pengaruh Ukuran Perusahaan, Solvabilitas, Likuiditas dan Perputaran Modal Kerja terhadap Profitabilitas pada Perusahaan Industri Dasar dan Kimia yang Terdaftar di Bursa Efek Indonesia Periode 2013-2015</td>
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<td>Panel Data regression analysis</td>
<td>Current ratio insignificant towards ROA. Total asset turnover, debt ratio, net profit margin, firm size significantly affecting ROA.</td>
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</tbody>
</table>

Source: Researcher, based on the literature used

**Conceptual Framework**

The theoretical framework of this study can be illustrated in the model as depicted below.
Hypothesis Development

H₁: Capital structure has a negative impact on financial performance using ROA as the measurement

H₂: Capital structure has a negative impact on financial performance using ROE as the measurement

H₃: Capital structure has a negative impact on financial performance using current ratio as the measurement

H₄: Firm size has a positive impact on financial performance using ROA as the measurement

H₅: Firm size has a positive impact on financial performance using ROE as the measurement

H₆: Firm size has a positive impact on financial performance using current ratio as the measurement

METHODOLOGY

Population and Sample

This research used secondary data. The financial statements and annual reports are collected from Indonesia Stock Exchange’s website. Secondary data used for the research includes data related to debt ratio for the measurement of capital structure, total asset for the measurement of firm size, and return on asset, return on equity, current ratio for the measurement of financial performance.

Empirical Model

\[ FP = \alpha_0 + \alpha_1 CS + \alpha_2 FS \] 

Where:

\[ \alpha_0, \alpha_1, \alpha_2 \] are coefficients

\[ CS \] is capital structure

\[ FS \] is firm size

\[ FP \] is financial performance

\[ ROA, ROE, \text{current ratio} \] are financial performance measures
\[ \alpha_0 = \text{constant} \]
\[ \alpha_1 = \text{coefficient} \]
\[ \alpha_2 = \text{coefficient} \]
\[ \text{FP} = \text{Financial Performance} \]
\[ \text{CS} = \text{Capital Structure} \]
\[ \text{FS} = \text{Firm Size} \]

**Operational Variable Definition**

**Capital Structure**
The formulation that will be used to calculate this ratio is according to Ivascu and Barbuta-Misu in 2017 and presented below:

\[ \text{Capital Structure} = \frac{\text{Total Liability}}{\text{Total Assets}} \] \hspace{1cm} (2)

**Firm Size**
According to Sujoko and Ugy (2007:45), the formula is mentioned by wirawan in 2017 and presented below:

\[ \text{Size} = \ln \text{of Total Assets} \] \hspace{1cm} (3)

**Financial Performance**
ROA, sometimes referred as "return on investment", is presented as a percentage and computed as follow regarding to Al-Qudah in 2017:

\[ \text{Return on Assets (ROA)} = \frac{\text{Net Income}}{\text{Total Assets}} \] \hspace{1cm} (4)

ROE is expressed in a form of percentage and calculated using the formula mentioned below:

\[ \text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Total Equity}} \] \hspace{1cm} (5)

The formula used to calculate current ratio is mentioned below and used by Robinson et al. in 2015:

\[ \text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} \] \hspace{1cm} (6)

**RESULT AND DISCUSSION**

**Test of Classical Assumption**

**Normality**
All of the measurements for financial performance, which include return on asset, return on equity, and current ratio, reflect a problem within the probability since the data
distribution is not normally distributed according to the histogram and respect to the significance level of 5%.

**Multi Correlation Test**

The value of VIF is 1.03 for both independent variables, capital structure and firm size, which means the result is within positive value of 1. This result proves that the VIF value is less than 10, this proves that there is no multicollinearity problem within the data or the relation between independent variables are not correlated.

**Autocorrelation**

From the results presented above, writer concludes that all of the measurements for financial performance including return on asset, return on equity, and current ratio are resulting in positive autocorrelation. This may be caused by the sampling method which use data over time or from certain periods which is a very common result when using collected over time data since previous period error might affect the next period performance.

**Heteroskedasticity**

In the relationship between capital structure and size toward financial performance using return on asset, return on equity, and current ratio as measurement, writer indicates that there are problems of heteroskedasticity.

**Multiple Regression**

**Goodness of Fit (Adjusted R Square)**

The value of adjusted R-squared is 12.44% of variation of dependent variable, financial performance using ROA as measurement, can be explained by capital structure and size. The rest 87.56% is affected by other variables outside this study.

The value of adjusted R-squared is 17.35% which means 17.35% of variation of dependent variable, financial performance using ROE as measurement, can be explained by capital structure. The rest 82.65 % is affected by other variables outside this study.

The value of adjusted R-squared is 52.8 % of variation of dependent variable, financial performance using Current Ratio, can be explained by capital structure. The rest 47.2 % is affected by other variables outside this study.

**ANOVA or F-Statistics**

For the relationship of capital structure and size with financial performance using return on asset, return on equity and current ratio as measurements, the results are simultaneously affecting or have influence over the dependent variable of financial performance.

**T-Test**

Capital structure has a significant positive effect on financial performance using return on equity as measurement. This issue can be resolved through the addition of data observation. While for capital structure and size relationship toward financial
performance using return on asset and current ratio, including size relationship with financial performance using return on equity as measurement, the results are significantly negative.

**Analysis of Regression**

Return on asset is the ability of the company to generate profit and this profit may come from a high level of investment activity. Management must be able to effectively maintain the investment activity within the company, also this is a good measurement of the management effectiveness in maintaining investment activity within a company. Based on the result, writer concludes that the first hypothesis (H₁) is **rejected**.

Return on equity is the ability of the company to generate return for their shareholders and this profit may come from a high level of funding activity. Management must be able to effectively maintain the funding activity within the company and use this result as a tool for measurement of the management effectiveness in maintaining funding activity within a company. Based on the result, writer concludes that the second hypothesis (H₂) is **rejected**.

An increase in total liability will decrease current ratio relatively in a large amount of value. Based on the result, writer concludes that the third hypothesis (H₃) is **rejected**.

Since the result of the regression is significant, this means an increase in firm size will affect return on asset relatively in a large amount of value. Based on the result, writer concludes that the fourth, fifth, and sixth hypothesis (H₄, H₅, H₆) is **accepted**.

**Conclusion and Recommendation**

**Conclusion**

Based on the result of the overall model data run used in the research, writer found that:

1. Capital structure is significant in affecting financial performance of a company, using Return on Asset (ROA) as the measurement.
2. Capital structure is significant in affecting financial performance of a company, using Return on Equity (ROE) as the measurement.
3. Capital structure is significant in affecting financial performance of a company, using Current Ratio as the measurement.
4. Firm size is significant in affecting financial performance of a company, using Return on Asset (ROA) as the measurement.
5. Firm size is significant in affecting financial performance of a company, using Return on Equity (ROE) as the measurement.
6. Firm size is significant in affecting financial performance of a company, using Current Ratio as the measurement.
Research Limitation

The limitation to this research include the following:

1. The study is limited to the manufacturing industry in consumption goods sector which are listed in Indonesia Stock Exchange for the period 2013-2017 and using the data of a small amount of companies, in particular 32 companies.
2. This study only took 3 measurements which are return on asset, return on equity, current ratio to measure the financial performance and used 2 variables which are capital structure and firm size to analyze the factors influencing financial performance.

Recommendation

Based on the analysis of regression and limitation of the research the following are the recommendations that writer would like to propose to increase reliance and accuracy of next studies:

1. The next studies may opt for primary data instead of using secondary data to achieve better reliance on the study.
2. The next study is expected to conduct between sectors research to get better results.
3. The next research is expected to add more period for the research, preferably more than 5 years to increase the accuracy of the results.
4. Management in related sector may view the result from this study for the purpose of decision making in capital structure policy, anticipating larger firm size, and maintaining financial performance using return on asset, return on equity, and current ratio as measurement.

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Tanggor Sihombing: Dosen UNIVERSITAS PELITA HARAPAN, Fakultas Ekonomi, Jurusan Akuntansi