

## THE EFFECT OF FINANCIAL PERFORMANCE AND MACRO ECONOMIC FACTOR TO PROFITABILITY OF BIDDER COMPANIES

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### Abstract

This study aims to determine the effects of leverage change, sales, market to book ratio; transaction cost, and interest rate after merger or acquisition on profitability change (return on assets or return on equity). The method used is multiple linear regressions. The type of data is cross sectional data. The samples are go public bidder companies that have annual or quarterly financial reports during one year before and after the merger or acquisition. The research results show leverage change, sales, market to book ratio, transaction cost and interest rate after merger or acquisition simultaneously have significant effect on the year and the next year change of return on asset or return on equity. Partially, leverage change and market to book ratio significantly influence on changes of profitability. Sales and interest rate significantly influence on the next year changes of profitability. Transaction cost partially has significant effect on next year changes of profitability.

**Keywords:** Merger and acquisition, leverage change, sales, market to book ratio, transaction cost, interest rate, profitability.

### Introduction

In the era of globalization, the competition level among industries escalates. Many companies are forced to innovate their business and reform their performance so they can compete with many other companies. The companies can reform and reshape their business internally and externally. The effort to reform a company externally can run faster than internally, such as by merging two companies or acquiring other companies. Merger and acquisition can be two options if a company wants to survive within the stiff competition. The main goals for companies to merge are to increase the market positioning, save the operational costs, reduce risks in developing new products, increase the speed in marketing products, add business diversification, and avoid excessive competition in a certain market (Wibowo & Pakereng, 2001). According to Gaughan (2011), the process of merger or acquisition will create an operating synergy. The operating synergy makes the merged companies possess more opportunities to seize the market so the sales projection will increase significantly. It can be concluded that the process of merger and acquisition will increase the profitability of a company, and as a result, it proves the improving company performance.

In Indonesia, the number of merger and acquisition activities is growing rapidly along with the national and global economic growth. The years of

2010 and 2011 are the period when the big waves of mergers were entering Indonesia. The historical record in KPPU (The Controller Commission of Business Competition) shows that the year of 2011 was the peak moment when many business owners conducted mergers or acquisitions in Indonesia. During the first quarter of 2012, the numbers of merger notifications escalate drastically. These numbers are still predicted to grow in the near future (Nurviani, 2013). Although many business owners pay more attention to the activities of merger and acquisition, the numbers of researchers are very limited, especially on these topics: on the influences of leverage change, company size, total transaction cost, market to book ratio, and level of interests to the profitability of the bidder company that conducts the merger or acquisition in Indonesia.

According to Lewellen (1971), companies that conduct mergers and acquisition can improve the financial leverage without having to increase the risk before merging, because there will be an increase in liability capacity as the result of the merger. Besides that, the companies can increase the financial leverage because there is unused debt capacity from the bidder or target companies (Ghosh & Jain, 2000). Bouraoui and Li (2014) conduct a research on the impact of the capital structure changes from the bidder companies that are doing mergers and acquisition to the performance of the bidder companies. The result of the research finds that the changes in leverage bring ne-

gative impacts to the financial performance of the bidder companies, both in the short term or long term after merging or acquiring. The bidder companies that utilize the leverage ratio from the target companies will possess better performance after the process of merger and acquisition. The influence from the leverage change to the profitability is also proven by Ong and Ng (2013), who state the leverage change significantly influencing the profitability of the companies.

A research by Bouraoui and Li (2014) find that a company size has a significant impact to the profitability of the company. This finding is supported by other researchers, Rau and Vermaelen (1998), who claim that big companies are more able to cope with cultural differences after merging to create synergy. The increased market to book ratio signifying that the company's stock appreciated by the market, it means when the company issues a new share, it will be appreciated by the market, and the company will get additional capital to increase its potential operations for profitability improvement. According to Jensen and Ruback (1983), there is an excess return of 4% after making the acquisition.

Gaughan (2011) states that one of the determinants of the target company for a good acquisition is an undervalued company. Shareholders and corporate managers tend to believe that the price paid to the target company is an undervalued price that can benefit the bidder company. Gaughan (2011) also argues that low-interest rates encourage the bidder companies to become private equity businesses.

In addition, the leveraged buyout eases bidder companies because most of the funding agencies have low debt interest rates. The increasing economic activities in the market also expand the availability of funds, so many companies can borrow at relatively low-interest rates with easy access. In the end, it encourages the merger or acquisition activities which will bring better profitability to the companies.

Regarding the previous researches on the impact of leverage change, size, total transaction cost, market to book ratio, and interest rates to the profitability of the bidder companies, this research is to investigate the impact of the five variables on the financial performance of the bidder companies in Indonesia for one year period of time after merging or acquiring for all industries from the year 2010 until 2015.

A merger is a combination of two companies where only one company survives and the joining company no longer operates. In the merger, the acquiring company takes over the assets and liabilities of the joining company (Gaughan, 2011). The acquisition occurs when a company takes over other

companies as target companies totally. Under this mechanism, the acquiring company maintains its identity while the acquired company is no longer in operation (Booth, Cleary, & Drake, 2014).

The classification of mergers and acquisitions are:

- a. Horizontal mergers happen when two similar companies doing similar businesses merge.
- b. Vertical merger happens when a company expands by acquiring another company that is not the competitor, but a company related to the customer (going forward) or a company related to the suppliers to create inputs for the production process (going backward).
- c. Conglomerate merger, happens when two or more unrelated companies merge. The motive to conduct a conglomerate merger is to reduce the risk, especially when different industries impose different risk, so that the total risk is reduced by diversifying businesses.

Meanwhile, the motives in conducting merger and acquisition according to Booth *et al.* (2014) is to create synergy, which increases the value of the combined companies above the bidder and target companies. There are several reasons to merge or acquire other companies (Booth *et al.*, 2014):

- a. Operating synergies
 

There are several kinds of operating synergies:

  1. Economic of scale
  2. Economic of scope
  3. Complementary strategies
- b. Increasing efficiency
 

Efficiency can be accomplished when two or more combined companies are over capacities. One way to increase efficiency is by laying off some employees. Over capacity might occur in some departments or divisions, such as the logistics, inventory, and information technology.
- c. Financing synergies
 

Financing synergies can happen for some reasons. The main factor that contributes to synergy is the easiness to access market capitals for big companies. Another reason is to reduce the varied cash flow, as the cash flow of big companies tends to be less volatile, especially when the cash flow of the two companies are not correlated.
- d. Saving tax
 

The tax advantages occur when the target company suffers high operating losses. These losses are beneficial because they can reduce future profits, and consequently, will reduce the company's tax burden, which happens after the merging process.

e. Redefining strategies

Mergers and acquisitions enable the new company to implement strategies that cannot be achieved before mergers or acquisitions, in the forms of new distribution channels and services to grow.

### *The Acquisition Funding*

According to Damodaran (2004), the funding for an acquisition can be obtained in two ways, by issuing new shares to finance the acquisition or by using debts which are often called leverage buyout. According to Gaughan (2011), during the leveraged buyout, the bidder company uses debts to finance the acquisition process.

There are some benefits from the leverage buyouts:

- a. Efficiency gains: efficiency gains happen when the target companies possess some overloaded capacities. After the merger, the numbers of overcapacity can be reduced.
- b. Tax benefits: if the target company owns debts, the debts can be used by the bidder company which gains relatively big profits (Gaughan, 2011).

Besides the benefits, the leverage buyouts bring some disadvantages to the companies, such as (Gaughan, 2011):

- a. Agency conflict.
- b. Business risk.
- c. Interest rate risk.

### *Interest Rates*

According to Gaughan (2011), the low-interest rates will push to private equity business. Leverage buyout will be cheaper if the credit interest rates are low. With the growth of economic activities, the availability of the financial fund in the market is also increasing, and many companies can borrow some money with lower interest rates. With the low-interest rates, the companies can reduce the risk by not publishing the obligations.

### *Firm Size*

Firm size is a measurement to categorize companies into big or small sizes (Bisbop & Megicks, 2002; Hanani & Aryani, 2011). The firm size is becoming more important because big companies can cope easily with integration problems after merger or acquisition (Rau & vermaelen, 1998).

### *Total Transaction Cost*

The acquisition costs in the merger are the value that bidder companies have to pay for each share of

the target companies. The value relies on the negotiation process between the bidder and the target companies. Meanwhile, in the tender offer, the acquisition costs are the value that the bidder companies have to pay in order to maintain enough share portions to control the target companies (Gaughan, 2011).

### *Market to Book Ratio*

Market to book ratio is a reflection of investor's appreciation or value to the stock price and the book value of a company. Market to book ratio gives information about the real value of the company's resources the higher the market to book ratio, the better the investor valuation to a company (Harahap, 2002).

### *Profitability Ratio*

Profitability ratio shows the ability of a company to make profit from its operational activities (Shidiq, 2012). Profitability is the main focus in evaluating the ability of the company to fulfill its obligation to investors and the future prospect of the company in creating the financial values. This is also related to the management effectiveness in using the total assets and equity. Profitability is measured by Return on Asset and Return on Equity.

Return on Assets (ROA) is used to evaluate the ability of a company in making profit from each asset unit. The high ROA shows the company's ability to make high profit or good performance (Brigham & Houston, 2007). Meanwhile, Return on Equity (ROE) is used to identify shareholder's return. ROE also shows the performance of the financial management (Brigham & Houston, 2007). The high ROE means the excessive fund can be invested to corporation, without any extra or additional investment from shareholders (Graham, Zweig, & Buffet, 2003).

### *The Relationship among Concepts*

#### *Size toward the Changes of ROA and ROE*

In the research of Bouraoui and Li (2014), sales as the proxy of company size have the significant impact to company's profitability, with the valuation of ROA or ROE within two years after merger or acquisition. According to Rau and Vermaelen (1998), big companies have the capital and the capability to face unexpected happenings so that they can maintain the performance better in the long term. Leverage change is toward the changes of ROA and ROE.

The funding for merger and acquisition using the leverage enables the company to enlarge the production capacity. The increased production capacity will improve the bidder company's capability to increase the profitability which is measured by ROA and ROE. According to Minton and Wruck (2001), merger and acquisition may increase the capital through external funding with lower interest rate costs. If a company can obtain adequate capital, the company can increase the production capacity so that the profitability improves, too.

### ***Transaction cost to the Changes of ROA and ROE***

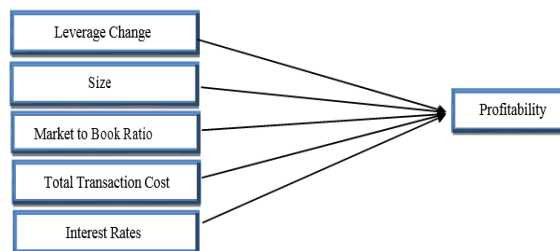
Transaction cost to acquire a target company happens when the bidder company considers the proposed transactional value is undervalued. It may also happen that the bidder company makes mistakes by proposing an overvalue estimation to the target company. When the bidder company acquires the target company with an overvalue position, the profitability of the bidder company may go down as the spending cost of the bidder company is higher than the benefit received by the bidder company (Agarwal, 2007). Too often, confident managers may handle the merger or acquisition better than average managers, but overconfidence may cause overvaluation to synergized opportunities, which leads to overpaying to the target company. Over paying is the loss for shareholders of the bidder company. This incidence is called Hubris hypothesis (Roll, 1986).

### ***Market to Book Ratio toward the Changes of ROA and ROE***

The increasing value of the market to book ratio indicates the trading share is appreciated by the market. If the company needs to issue new shares, the market will accept them. The new shares create new additional fund for the company to invest or develop new products, which will lead to the increased profitability. According to Jensen and Ruback (1983), there is an excess return of 4% for stockholders of the bidder company after doing an acquisition.

### ***Interest Rates to the Changes of ROA and ROE***

The higher the interest rates, the higher the chance for merger or acquisition happens. The slow increasing interest rate indicates the better economic prospect (Ungerman, 2015). This signal will drive the bidder company to merge or acquire to seize the opportunity by growing fast through merger or acquisition (Schoop, 2013).



**Figure 1. The Conceptual Framework**

### ***Research Hypotheses***

1. Leverage Change, Size, and Market to Book Ratio, Transaction Cost and Interest Rate after merger and acquisition simultaneously bring significant impacts to the changes of ROA of the bidder company during the merger or acquisition process.
2. Leverage Change, Size, and Market to Book Ratio, Transaction Cost and Interest Rate after merger and acquisition simultaneously bring significant impacts to the changes of ROA of the bidder company one year after the merger or acquisition process.
3. Leverage Change, Size, and Market to Book Ratio, Transaction Cost and Interest Rate after merger and acquisition partially bring significant impacts to the changes of ROA of the bidder company during the merger or acquisition process.
4. Leverage Change, Size, and Market to Book Ratio, Transaction Cost and Interest Rate after merger and acquisition partially bring significant impacts to the changes of ROA of the bidder company one year after the merger or acquisition process.

The similar hypothesis implements on Return on Equity (ROE).

### **Research Method**

The type research is a descriptive quantitative research. The population for this research is the bidder company listed in the Indonesia Stock Exchange. The samples follow these criteria:

- a. The bidder companies must go public companies.
- b. The companies must provide the financial report one year before and after the merger or acquisition process.
- c. The observation is from the year 2009 until 2015.

The data are using secondary data which are obtained from [www.idx.co.id](http://www.idx.co.id). The method to collect the data is documentation. The sampling technique is a nonrandom sampling, in which the sample is chosen

non-randomly so that not all elements of the population have similar opportunity. The population element is selected through purposive sampling, or a data collecting technique with certain considerations (Sugiyono, 2013).

Data analysis techniques cover descriptive analysis, classic assumption test, and regression analysis. One of regression models for this research is:

$$\Delta = + 1* + 2* -1 + 3 * -1 + 4 * + 5* + et$$

$\Delta$ ROA represents changes in Return on Asset, LC represents leverage change, MB represents market to book ratio, TTC represents total transaction cost, and YD my represents Interest Rate. The hypothesis testing's conducted by regression analysis, which includes *F*-test, *t*-test, and the classical assumption test.

### Result and Discussion

For this research, the observed companies are those bidder companies which conduct mergers or acquisitions within the year of 2010 to 2015. Using the purposive sampling, the samples are the companies listed in BEI or Indonesian stock exchange.

**Table 1**  
**The Result of Regression Analysis**

Dependent	<i>F<sub>test</sub></i>	<i>T<sub>test</sub></i>				
		<i>F<sub>test</sub></i> Change	Leverage Sales	Transaction Cost	Book	Market to Interest Rate
$\Delta$ ROA <sub>t</sub>	**	**	-	-	*	-
$\Delta$ ROA <sub>t+1</sub>	*	-	*	-	*	*
$\Delta$ ROE <sub>t</sub>	*	*	-	**	*	-
$\Delta$ ROE <sub>t+1</sub>	*	*	*	-	**	-

\* = significance at 0.05 level.  
\*\* = significance at 0.10 level.

Simultaneously, the leverage change, size, total transaction cost, market to book ratio, and interest rates have a significant influence on the changes of the bidder company's profitability measured by ROA and ROE, during the year of merger or acquisition taking place or one year after the merger or acquisition taking place.

Moreover, leverage change brings a positive significant influence to the profitability of the bidding company. Overall, it shows that the bidder companies are increasing their debts. This indicates that the bidder companies can ensure the third party to fund the merger or to get access to loans. The creditors may observe that the merger or acquisition will likely increase the opportunity of the bidder companies to improve their financial performance. After obtaining the leverage change, the bidder companies can prove to improve their profitability which is measured by ROA and ROE, during the year of merger or acquisition taking place or one year after the merger or acquisition taking place.

size gives significant influences two years after merger or acquisition. Meanwhile, in this research, the size brings significant influences one year after merger or acquisition. The big companies can obtain bigger sales, and these bigger sales show the size of the companies. According to Rau and Vermaelen (1998), a big company has enough capital and capability to face unexpected happenings to reach better performance in the long term. Integration becomes the key word to reach synergy after merger or acquisition. The big company usually can manage cultural differences, management transformation, and other integration issues better.

Transactional cost brings a negative significant influence to the profitability of a bidder company. According to Agarwal (2007), one failure reason for merger or acquisition is overpricing. If bidder companies pay more to a target company, it will harm the bidder company financially because the cost spent by the bidder company is higher than the actual gain from the merger or acquisition. This is proved by the finding in this research that shows the higher the transactional cost of any merger or acquisition, the lower the profitability of the bidder company.

The change of market to book ratio brings positive significant influences to the profitability of the bidder companies during the year of merger or acquisition. However, it brings negative significant influences to the bidder companies one year after the merger or acquisition. This happens because the investors hope the bidder company bringing in synergy to improve the financial performance during the first year after merger or acquisition. After one year, however, the real result of the merger or acquisition is not as high as expected by the investors.

The influence of interest rates on profitability, which is measured by ROA, appears during the first year after merger or acquisition, with the tendency of the higher the interest rates, the higher the chance the merger or acquisition taking place. The gradual increase in the interest rates indicates a better economic prospect (Ungerman, 2015). This signal will push the bidder companies to do merger or acquisition to utilize the opportunity by growing fast through merger or acquisition (Schoop, 2013).

Leverage change has no significant influence on the profitability of a bidder company one-year after the event of a merger or acquisition. The funding for the merger or acquisition process can be obtained from both debt and transaction cost. Financing with a debt is certainly easier due to the fund obtained

through third parties, but the debt would also have a negative impact, such as the interest rate. Due to the difficulties to anticipate the real value of transactions, the bidder companies sometimes owe in excessive amounts that may not necessarily increase the profitability of bidder companies due to the high-interest rate expense and debt obligations to be paid. This is in accordance with the findings of Ghosh and Jain (2000).

The size does not significantly affect the profitability of the company when the merger or acquisition is measured by Return on Asset and Return on Equity. Along with the research of Bouraoui and Li (2014), a number of sales, as a proxy for the intensity of the company's influence, have not been observed at the time of the merger or acquisition event, but only appeared one year after the event of the merger or acquisition.

The transaction cost has no significant effect on the profitability of bidder companies. It is because the value of a merger or acquisition transaction is influenced by many things, such as the bargaining power of the bidder company, the bargaining power of the target company, the financial condition of the target company, the potential number of bidder companies that intend to acquire the target company. So, the value of the transaction is not a fair price but a psychological price.

The interest rates have no significant effect on the profitability of bidder companies. It means that the high-interest rates do not affect the process of merger or acquisition, which is expected to increase the profitability of the company. The company's opportunity to conduct a merger or acquisition process is not only determined by macro variables but also internal factors. According to Battinelli and Reid (2013), mergers and acquisitions are driven by a combination of external and internal factors.

### Conclusions and Implications

The analytical conclusion from the influence of the capital structure changes after merger or acquisition to the profitability of the bidder companies are as following:

1. Leverage change, size, transaction cost, market to book ratio, and interest rates simultaneously bring a significant influence to the profitability of the company, which are measured by ROA or ROE at the time of the merger or acquisition, or one year after that.
2. Leverage change and market to book ratio partially have a positive significant influence on ROA during the merger or acquisition.

3. Size and interest rate partially have a significant positive effect on ROA one year after merger or acquisition and market to book ratio has a negative significant effect to ROA one year after merger or acquisition.
4. Partially, leverage change and market to book ratio have positive significant effect to ROE during the merger or acquisition, and transaction cost has significant negative effect to ROE during the merger or acquisition; meanwhile size, total transaction cost, and interest rate partially have no significant effect to ROE at the time of merger or acquisition.
5. Partially, leverage change and size have a positive significant effect on ROE one year after the merger or acquisition, and market to book ratio has a negative significant effect to ROE one year after the merger or acquisition; meanwhile the variables of total transaction cost, market to book ratio, and interest rate partially have no influence on ROE one year after the merger or acquisition.

For a suggestion, the research samples should be increased or added, because the available data currently still need to be added to the events of merger or acquisition in the subsequent years.

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