TOBIN'S Q ANALYSIS AS AN INDICATOR USED IN MEASURING AND ANALYZING BANKING INDUSTRY OF COMPANIES LISTED IN KOMPAS100 PERIOD 2010-2014

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Abstract

In globalization era, business world continues to develop in accordance to the demands of changing times. Capacity of the company to compete in the market will determine the performance of the company itself. The value of the company reflects abstraction and performance of the company. If the company is certainly well worth, it is going to influence investors to invest in the company. The objective of this research is to analyzed the data given from companies listed in the Bank Sector at Kompas 100 using method of Tobin's Q. This study aims to determine whether the value assigned by the market based on the number of sales of shares in the year multiplied by the share price at the end of last year that sought to be greater than the total of all assets of the company during the year. Results and conclusions showed there are three companies in the undervalued categories namely BBNI, BBRI, BDMN, PNBN, BMRI, BJTM, BJBR, BBCA, BBKP in year 2010-2014, a company namely BBTN company touched the position of overvalued company at the year of 2011.

Keywords: Tobin's Q Method, Bankruptcy, Indonesian Stock Exchange,

I. Introduction

In globalization era, business world continues to develop in accordance to the demands of changing times.Capacity of the company to compete in the market will determine the performance of the company itself. According to Weston and Copeland (1997), they defines the value of the company is to maximize the value of the mean considering the effect of time on the value of money, the funds will be received this year higher value of the funds will be received in the coming year and the mean is also considering various risks to the company's revenue stream. Meanwhile, according to Suad (2005) value of the company is willing to pay the price a prospective buyer if the company is sold. From the above it can be seen that the value of the company reflects abstraction and performance of the company. In other words, if the company is certainly well worth, it is going to influence investors to invest in the company.

The indicators used as a measurement variable must be tested first fatherly determine its accuracy. Tobin's Q as one indicator variable measuring the performance of the company from an investment perspective has been tested in a variety of situations to top management. James Tobin, a professor at Yale University, hypothesized that the overall value of the market for all companies on the stock market price will be similar to the cost of the asset placement. Tobin's Q value is generated from the total market value of shares (market value of all outstanding stock) as compared with the rest of the assets owned by the company and the results shows the potential market value of a company.

Companies selected are companies included in the index KOMPAS100 in the banking sector.

KOMPAS100 index is equal to the LQ45, which is linked to the issue of liquidity of the stock. In this case used as the basis for calculation of the index is 100 active stocks. Yet more emphasis samples used in nine companies that were in the banking sector at the KOMPAS100.

This study aims to determine whether the value assigned by the market based on the number of sales of shares in the year multiplied by the share price at the end of last year that sought to be greater than the total of all assets of the company during the year. After that, researchers will compare the results obtained Q ratio of companies each year from 2010 to 2014. That's one way to measure the performance of the company based on the ratio of the market value and the value of assets.

II. REVIEW OF RELATED LITERATURE

Management need to assess the financial condition of his or her company. These needs not just come as a job description, but also an obligation of any worker of a company. By doing that the company can gauge and therefore gain interest of investor and other financial parties with an interest in relation to the company's financial condition. By knowing the financial condition of the company, a rational decision can be made with the help of certain analytical tools. Financial analysis can be done either by an external company such as creditors, investors, and the company's own internal (Sawir, 2003, Fahmi, 2014). Analyze financial performance is by evaluating past performance, then predict the company's future prospects, and then re-evaluate what has happened in the past in order to improve the company's financial performance in the future (Fahmi, 2014). Moreover, Fahmi (2014) suggest that there are five stages in analyzing the financial performance of a company in general, namely: 1. Conduct a review of financial statement data, 2. Perform calculations, 3. Perform a comparison of the results that have been obtained count, 4. interpretation (interpretation) of the various problems found, and 5. Search for and provide solutions (solution) to various problems found. (pp. 239-241). There are various media that can used gauge a company's health, namely: financial statements, that consists of, balance sheet, profit and loss, an overview of retained earnings, and statement of financial position. A financial statements portray the financial condition and results of operations of a company at a certain time or a certain period of time. (Harahap , 2015; Kartikahadi et. al., 2012). Brigham and Houston (2010) also stated that The financial statements report the position of the company at one point in time and operations over the past period. However, its real value is in the fact that they can be used to help predict future earnings and dividends. From the standpoint of investors, forecasting the future is the essence of the actual financial analysis. Meanwhile, from the standpoint of management, financial statement analysis is useful to help anticipate future conditions, which is even more important as a starting point for planning actions that will improve performance in the future. In a financial statement, every company can used gauge its condition through different tools, and one of them is by using financial ratio analysis. Financial ratios are designed to assist us in evaluating the financial statements as a measurement tool in assessing the company's financial condition and performance (Hery, 2015; Horne, 2009)

In terms of investment, an investor can look into the companies through the capital market (Nasarudin and Surya, 2004; Tandelilin, 2010; Siamat, 2004, Anoraga and Pakarti, 2003). Though their purpose are to buy stocks, bonds, rights, options, and warrants, an analysis of a company's condition is of used to purse their purposes. Sawir (2004) suggest that financial difficulties or financial distress faced by the firm can vary between liquidity problems, in which the company is unable to meet financial obligations while, until trouble solvency (bankruptcy), where the company's financial liabilities had exceeded his fortune. And this can affect the mind of the investor. Another method in the financial ratios analysis that can be used is the method of Tobins'Q. Tobin's Q is an indicator to measure the company's performance, especially on the value of companies that demonstrate a Performance management in managing the assets of the company. Tobin's Q value describes a state-owned enterprise investment opportunities (Lang, et al 1989) or the company's growth potential (Tobin & Brainard, 1968; Tobin, 1969). Tobin's Q is used in researches, in comparing the Tobins'Q method and other method such as Altman Z-Score (Sudiyatno and

Puspitasari), company's performance indicator (Wolfe and Sauaia, 2003), and Valuing small capitalization companies (Fiakas, 2005).

III. METHOD OF THE STUDY

The method used in this study is descriptive, and the data collected was analyzed and presented in a descriptive manner. The data were derived from end of the year stock price, total of outstanding share, total asset from the company and KOMPAS100 Index data. The sample used in the study are 9 companies that are listed as companies listed in KOMPAS100 Index at Indonesia Stock Exchange in year 2010-2014. The sample obtained from the active bank companies traded during the observation period of month January to December in the year 2010-2014. Variables are identified among other things, the market value listed, the total asset, and the Q ratio used for intrepertation. Analysis of the data used with the help of Microsoft Office Excel 2013. The stages in the data analysis are as follows:
1. Calculate the market value on individual stocks (MV) each year,
2. Calculate the total asset
3. Calculate the Q ratio

Q ratio is a measure of a parallel connection of an market value with a whole asset in the company. When the value 0 – 1 : When the Tobin's Q ratio is between 0 and 1, it costs more to replace a firm's assets than the firm is worth
When Q > 1: A Tobin's Q above 1 means that the firm is worth more than the cost of its assets. Because Tobin's premise is that firms should be worth what their assets are worth, anything above theoretically indicates that a company is overvalued.

IV. RESULTS AND DISCUSSION

MARKET VALUE (MV)
Market value is the price an asset would fetch in the marketplace. Market value is also commonly used to refer to the market capitalization of a publicly-traded company, and is obtained by multiplying the number of its outstanding shares by the current share price. At the year 2010-2014, the market value of the companies in this study are as follows:

Table 1. Market Value

Code	2010
BBNI	71,540,908,335,375
BBRI	128,277,806,475,000
BBTN	14,142,188,343,000
BDMN	47,500,033,497,000
PNBN	27,174,916,437,720
BMRI	135,112,215,823,000
BBCA	156,214,138,368,000
BBKP	4,488,242,689,450
BJBR	13,919,025,968,300
Code	**2011**
BBNI	70,156,245,593,400
BBRI	164,851,675,065,000
BBTN	105,816,918,880,750
BDMN	38,904,067,417,100
PNBN	18,593,363,878,440
BMRI	155,924,999,993,250
BBCA	195,267,672,960,000
BBKP	4,567,856,226,140
BJBR	8,735,388,711,140
Code	**2012**
BBNI	68,310,028,604,100
BBRI	169,736,169,141,000
BBTN	14,863,283,725,000
BDMN	53,611,702,660,150
PNBN	15,017,716,978,740
BMRI	187,109,999,991,900
BBCA	222,116,977,992,000
BBKP	4,892,197,223,460
BJBR	10,175,287,949,240
Code	**2013**
BBNI	72,925,571,077,350
BBRI	177,062,910,255,000
BBTN	9,099,289,545,000
BDMN	35,820,208,414,525
PNBN	15,732,846,358,680
BMRI	181,334,999,992,150
BBCA	234,321,207,552,000
BBKP	4,898,587,563,460
BJBR	8,543,402,146,060

Code	2014
BBNI	112,619,236,347,300
BBRI	284,521,779,927,000
BBTN	12,606,464,180,000
BDMN	42,936,806,112,775
PNBN	27,770,857,587,670
BMRI	248,902,499,989,225
BBCA	320,361,025,950,000
BBKP	6,746,815,671,000
BJBR	13,919,025,968,300

Table 1 shows 9 companies observed that were listed in KOMPAS100 Index at Indonesia Stock Exchange at the end of year 2010-2014.

TOTAL ASSET (TA)

Total assets are the sum of all current and noncurrent assets that a company owns. They are reported on the company balance sheet. The total asset figure is based on the purchase price of the listed assets, and not the fair market value. Table 2 shows the total asset each year, it shows for year 2010-2014.

Tabel 2. Total Asset (TA)

Code	2010
BBNI	248,580,529,000,000
BBRI	404,285,602,000,000
BBTN	68,385,539,000,000
BDMN	118,206,573,000,000
PNBN	108,947,955,000,000
BMRI	449,774,551,000,000
BBCA	324,419,069,000,000
BBKP	47,489,366,000,000
BJBR	43,445,700,000,000
Code	2011
BBNI	299,058,161,000,000
BBRI	626,182,926,000,000
BBTN	89,121,459,000,000
BDMN	142,292,206,000,000
PNBN	124,755,428,000,000
BMRI	551,891,704,000,000
BBCA	381,908,353,000,000

BBKP	57,183,463,000,000
BJBR	54,448,658,000,000
Code	**2012**
BBNI	333,303,506,000,000
BBRI	801,955,021,000,000
BBTN	111,784,593,000,000
BDMN	155,791,308,000,000
PNBN	148,792,615,000,000
BMRI	635,618,708,000,000
BBCA	442,994,197,000,000
BBKP	65,689,830,000,000
BJBR	70,840,878,000,000
Code	**2013**
BBNI	386,654,815,000,000
BBRI	469,899,284,000,000
BBTN	131,169,730,000,000
BDMN	184,237,348,000,000
PNBN	164,055,578,000,000
BMRI	733,099,762,000,000
BBCA	496,304,573,000,000
BBKP	69,457,663,000,000
BJBR	70,958,233,000,000
Code	**2014**
BBNI	416,573,708,000,000
BBRI	551,336,790,000,000
BBTN	144,575,961,000,000
BDMN	195,708,593,000,000
PNBN	172,581,667,000,000
BMRI	855,039,673,000,000
BBCA	552,423,892,000,000
BBKP	79,051,268,000,000
BJBR	75,836,537,000,000

TOBIN'S Q RATIO ANALYSIS (Q)

The Tobin's Q ratio is a measure of firm assets in relation to a firm's market value. One, the numerator, is the market valuation is the mprice in the market for exchanging existing assets. The other, the denominator, is the replacement or

reproduction cost: the price in the market for the newly produced commodities. The ratio can useful as the nexus between financial markets and markets for goods and services. Q in this study using market value and total asset calculation derived from KOMPAS100 index.

Table 4: Q Ratio Analysis

Code	2010	2011	2012
BBNI	0.29	0.23	0.20
BBRI	0.32	0.26	0.21
BBTN	0.21	1.19	0.13
BDMN	0.40	0.27	0.34
PNBN	0.25	0.15	0.10
BMRI	0.30	0.28	0.29
BBCA	0.48	0.51	0.50
BBKP	0.09	0.08	0.07
BJBR	0.32	0.16	0.14
Code	2013	2014	
BBNI	0.19	0.27	
BBRI	0.38	0.52	
BBTN	0.07	0.09	
BDMN	0.19	0.22	
PNBN	0.10	0.16	
BMRI	0.25	0.29	
BBCA	0.47	0.58	
BBKP	0.07	0.09	
BJBR	0.12	0.09	

Based on the table above, the results shows the companies that have undervalued of market value shows in their Q 0 - 1, such as BBNI (0,29; 0,23; 0,20; 0,19; 0,27), BBRI (0,32; 0,26; 0,21; 0,38; 052), BBTN (0,21; 0,13; 0,07, 0,09), BDMN (0,40; 0,27; 0,34; 0,19; 0,22), PNBN (0,25; 0,15; 0,10; 0,10; 0,16), BMRI (0,30; 0,28; 0,29; 0,25; 0,29), BBCA (0,48; 0,51; 0,50; 0,47; 0,58), BBKP (0,09; 0,08; 0,07; 0,07; 0,09), BJBR (0,32; 0,16; 0,14; 0,12; 0,09). Q that is undervalued shows that it costs more to replace a firm's assets than the firm is worth. On the other hand, the results also show companies that have overvalued type of company as shown in their Q > 1, such as:

BBTN (1,19) at the year of 2011. Q that is overvalued shows that the firm is worth more than the cost of its assets.

V. Conclusion

Based on the results of the study and after measuring and analyzing the KOMPAS100 bank of companies listed in the Indonesian Stock Exchange using Tobin'Q ratio analysis, the Q ratio shows that companies that is undervalued tend to a lot more valued than the fim's asset. It means that the firms asset is less valued than what the market valued the company, such as BBNI, BBRI, BBTN, BDMN, PNBN, BMRI, BBCA, BBKP, BJBR from the year 2010-2014. And companies with overvalued type of market value tend to have more value from the asset than what the market value shows from the outstanding share with the closing price., like BBTN at the year of 2011. It is recommended for further research to look on other method or perspective such as S-score and Z score in analyzing these data.

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