The Effect of Working Capital, Leverage, and Firm Size towards Corporate Performance with Liquidity as Moderating Variables

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Abstract — The purpose of this research to analyse the effect of working capital, leverage, firm size and liquidity on corporate performance, with liquidity as a moderating variable. Samples in this research uses the 29 companies listed on IDX are in the category LQ45 period February 2013 - February 2016. The analytical tool used in this research is multiple linear regression models with path analysis. These results indicate that working capital positive effect on corporate performance, firm size negative effect on corporate performance. Leverage and Liquidity are no effect on corporate performance. Liquidity as a moderating variable indicate strengthen the effect of working capital while liquidity weakens the leverage effect on corporate performance.

Keywords—Working Capital, Leverage, Firm Size, Liquidity, and Corporate Performance.

I. INTRODUCTION

The Ministry of Finance of the Republic of Indonesia (2014) through the KEMENKEU portal states that the moment of the global financial crisis occurred in 2007 - 2008, which stems from the failure of financial products, also called sub-prime backed Collateralized Debt Obligation (CDO), economic growth and unemployment in countries affected by the crisis are getting worse. The United States (US) is the worst affected CDO failure (where the CDO itself comes from the US financial market). The financial crisis that affected the difficulties of liquidity in the financial market was transmitted to the real sector (main street), where non-financial companies that did not have a role in the crisis also experienced liquidity difficulties. This is because the banking industry that plays an important role to intermediate the source of funds for these companies also requires funds to meet their liabilities.

CDO failure is a major source because the circulation of these toxic derivatives is so great that it makes the asset side of the bank that has this product shrinking. With the difficulty of liquidity, the real sector companies in the US no longer have the ability to fund their operating costs, especially to pay wages from employees. The impact, they were forced to stop the company’s operations which later led to increased unemployment. When the unemployment rate increases, US economic growth worsens to about -3% in 2009.

[4] describes the sources of funds he received while still working at the Directorate General of Taxes, namely PT Bumi Recources, PT Arutmin, and PT Kaltim Prima Coal. With the bribe Bakrie Group wants Gayus Tambunan to do three jobs, PT Bumi Resources appealed in 2005, Gayus asked to make an appeal letter, a letter of rebuttal, and including any preparation needed in return for 3 million US dollars which he then distributed to Alif Kuncoro, Imam Cahyo Maliki, Maruli Pandapotan Manurung.

[7] states that there are three decisions that financial managers must make to maximize shareholder wealth: (1) investment decisions, (2) funding decisions, and (3) working capital decisions. Although compared to investment and funding decisions, working capital decisions do not show a direct effect on value added, but working capital decisions are equally important than investment and funding decisions. About 60% of managers' time will be spent on working capital policy.

President and Chief Executive Officer of Bakrie and Brothers, [1] said Bakrie and Brothers pawn the company's shares to finance working capital. This funding opportunity is sought with the most inexpensive and optimal scheme. Until now, the company also continues to monitor market conditions to issue bonds. According to the financial statements, the company made loans to several companies. On July 2, 2012, Bakrie & Brothers obtained a loan of Rp 124.35 billion from Purple Rain Resources Ltd. The loan is secured by the shares of its subsidiaries, amounting to 117.35 million shares of PT Energi Mega Persada Tbk (ENRG) and 150.42 million shares of PT Bakrieland Development Tbk (ELTY).

Expert opinion and phenomenon related working capital above, it can be concluded that many efforts made by each company to fund its working capital related to that Bakrie Group who pawned his share for the fulfillment of working capital turned out to be his management that is not in accordance with the correct analysis so that it can be excluded from the LQ 45 list at the end of 2013 period.
companies tend to have higher working capital compared with large companies. The composition of current assets and current liabilities for large and small companies may consist of 65.5% current assets and 32.8% of current debt for small firms. While the composition for large companies are 31% current assets and 24.4% current liabilities. From the description above can be understood that the effectiveness of the company's performance in managing its finances on the asset side will be seen if good management has run its duties and functions. Total assets are expected to support the business activities of the company to achieve maximum company performance.

[9] states, financial statement analysis is one way to know the company's performance in a period. The financial statements show the company's current financial condition at a certain date and a certain period. One analysis can be done to assess the company's financial performance with solvency ratio (leverage). This analysis is used to determine the ability of the company to pay all its obligations both short and long term if the company is dissolved.

[2] states, solvency analysis involve several key elements of capital structure and profit (earnings) or earning power (earning power). A stable earnings flow is an important measure of a company's ability to borrow when cash shortages. It is also a measure of a company's ability to rise from a state of financial difficulty.

Also stated, lenders protect themselves from the possibility of corporate default and financial pressure with the terms of debt with the loan agreement. This term of conditioning define a default condition, often based on the size of the account at the level that gives the lender the opportunity to collect the loan before the onset of severe financial hardship. Each year, about 40% of small business owners seek loans. Banks decline almost one-quarter of their number.

Executive Director of Data Word which is an independent analyst institution, [12] Metta Dharmasaputra (2012) said Bakrie risk default (default) on its debts. This is due to the sharp decline in world coal prices. Coal prices slumped from around US $ 140 per ton in early 2011 to below US $ 90 per ton. "The assets of three companies Bakrie (owner of the largest debt of coal," Metta explained, according to the financial statements of the first quarter of 2012, there are three Bakrie companies with the largest debt, namely Bakrie and Brothers, Tbk has total debt Rp 8.6 trillion with total 2012 maturity Rp 2.3 trillion of Bumi Resources Tbk is owed US $ 3.69 billion with total maturity in 2012 US $ 62 million Bumi Resources Mineral, Tbk owes US $ 295 billion with total maturity of US $ 12 million.

The high debt ratio has caused the stock price of several Bakrie Group companies in Jakarta and London stocks to continue to be depressed since early 2011. Data said that PT Bumi Resources, thk fell by 77 percent and PT Bakrie and Brothers down 29 percent. Meanwhile Bumi Plc's share price in London declined 74 percent, and PT Bumi Resources Mineral Tbk by 36 percent. According to Metta, Bakrie has faced several threats of default. In 2011, Bakrie paid part of the total debt of US $ 1.35 billion. Bakrie sold half of Bumi's ownership to Borneo Lumbung Energi and Metal. In 2012, Credit Suisse Group asked Bakrie Group to pay US $ 100 million. "Additional guarantee (top up), after the value of shares of Bumi Plc which is used as collateral for loan Bakrie plummeted in the London stock exchange," he said. Total debt to Credit Suisse is US $ 440 million.

From the above two statements of experts and phenomena that occurred in Bakrie Group can be concluded that the importance of solvency analysis (leverage) to assess the company's financial performance and measure the company's ability in paying off its debt in order not to risk of default.

Corporate governance is not independent and not in accordance with existing theory, in general when applied to a company it will experience a management failure. Similar things experienced by many Bakrie Group which in the early era of 2.000an group bakrie is a liquid company and registered at LQ45 in period August 2012—January 2013. But management which not appropriate can cause collapse of an existing business.

Nitin Soni (2012) Singapore fitch ratings analyst stated that PT Bakrie Telecom Tbk's engagement with PT Sampoerna Telekomunikasi Indonesia (STI), which has been initiated since March 2012, is doubtful could have a positive impact on Bakrie Telecom's performance. Bakrie Group's liquidity condition is still faltering.

Fitch Ratings said Bakrie Telecom's current liquidity capability has been in the Rating Watch Negative (RWN) stage. This stage means, in the next three months Bakrie Telecom's downside opportunities are quite large, around 50%. RWN's status reflects that the company headed by Aburizal Bakrie's eldest son, Anindya Bakrie, does not have enough liquidity to meet the obligation to repay the bonds worth Rp 650 billion. The bonds will mature on September 4, 2012.

At the end of March 2012, Bakrie Telecom's cash and cash equivalent was recorded at Rp 215.29 billion. "Business ties with Sampoerna Telekom, including the acquisition of a 35% stake in STI, do not materially improve Bakrie Telecom's financial capability.

Companies that have the best liquidity rating with the top 45 ranking on the Indonesia Stock Exchange (IDX) or the Indonesian Stock Exchange (IDX) [8] are named LQ45. A pride for an issue in the stock exchange in Indonesia, its company name is listed in LQ45. The LQ45 Company is assessed periodically for six months and its financial performance is monitored by BEI. In the listed companies - companies with the best liquidity in LQ45 there are listed companies fixed and also new. After the liquidity value is no longer entered on the category LQ45 then the company will be eliminated from the LQ45 list.

This research is different from previous research. This study combines several variables that are considered important
in supporting the analysis of working capital management, debt funding analysis, and company size that is expected to support the company's performance well with liquidity analysis as a variable that moderating influence of working capital and leverage to company performance.

Based on the identification of problems that have been described above, it can be formulated problem in this research is to know how big influence of working capital, leverage, firm size, and liquidity either partially or simultaneously to corporate performance at company LQ45 registered fixed period February 2013 until February 2016? And to know how much liquidity strengthen or weaken the influence of working capital and leverage on corporate performance? The purpose of this research is to analyse and know how big influence of working capital, leverage, firm size, and liquidity either partially or simultaneously to corporate performance and analyse moderation of liquidity in weakening or strengthening influence of working capital and leverage to corporate performance.

II. THEORITICAL REVIEW

A. Working Capital.

First, [9] states that it can be believed to run its activities every company requires a certain amount of funds, either funds from loans or from own capital. The entire fund is usually used for two things. First used for investment purposes. This means that the funds are used to purchase or finance the fixed and long-term assets that can be used repeatedly, such as the purchase of land, buildings, machinery, vehicles and other fixed assets. Second, funds are used to finance working capital, i.e. capital used for short-term financing, such as raw material purchases, payroll and wages, and other operational costs.

[13] define “operating working capital turnover indicates how many dollars of sales a firm is able to generate for each dollar invested in operating working capital.

[7] states that gross working capital refers to current assets, which usually include cash, accounts receivable, and inventories. Net working capital is usually defined as current operational assets minus current operating debt. Usually current operational assets include cash, accounts receivable, and inventory. While operational current debt includes trade debt and accrual debt (eg salary debt and tax debt).

[9] states one of the measuring tools to determine the success of working capital management is measured from its capital turnover or working capital turnover. By knowing the rotation of working capital in one period it will be known how effective working capital in a company.

[3] states the risk of default failure or risk default often occurs when the company is too large to put the source of working capital from external without taking into account the turnover conditions in the company. The turnover rate of working capital can also be measured from the balance sheet and income statement at any given moment by comparing net sales with current assets.

[9] formulated a working capital turnover by comparing net sales with total current assets. The formula used to find the working capital turnover is as follows:

$$\text{Working Capital Turnover} = \frac{\text{Net Sales}}{\text{Total Current Assets}}$$

B. Leverage

The template is used to format your paper and style the text. All margins, [14] stated that “Long-term solvency ratios are intended to address the firm’s long-run ability to meet its obligations or, more generally, its financial leverage”. From these statements, it can be understood that the solvency of a company can be measured by its ability to pay off its long-term debt.

[13] state that

“A company’s financial leverage is also influenced by its debt financing policy. There are several potential benefits from debt financing. First, debt is typically cheaper than equity because the firm promises predefined payment terms to debt holder. Second, in most countries interest on debt financing is tax deductible whereas dividends to shareholders are not tax deductible. Third, the financing can impose discipline on the firm’s management and motivate it to reduce wasteful expenditures. Fourth, for non-public debt, it is likely to be easier for management to communicate their proprietary information on the firm strategies and prospects to private lenders than to public capital market”.

[9] states that the ratio of solvency or leverage ratio is the ratio used to measure the extent to which the company's assets are financed with debt. In this analysis can be interpreted how a company can run its business with assets owned by the source of funding that comes from debt.

[9] stated that Debt to equity ratio or total debt to capital is the ratio used to assess debt with equity. This ratio is sought by comparing the entire debt, including current debt with the entire equity. This ratio is useful to know the amount of funds provided by the borrower (creditor) with the owner of the company. In other words, this ratio serves to find out each rupeiah own modal used for debt guarantees. For the bank (creditor), the greater this ratio will be more unfavourable because the greater the risk borne for the failure that may occur in the company. However, the company the greater is the ratio the better. In contrast to low ratios, the higher level of funding the owner provides and the greater the security limit for the borrower in the event of a loss or depreciation of the asset value. This ratio also provides general guidance on the feasibility and financial risk of the company. Debt to equity ratio for each company will vary depending on business characteristics and diversity of cash flow. Firms with stable cash flow typically have higher ratios than less stable cash ratios. [9] formulates the debt to equity ratio as follows:
Debt to Equity Ratio = \( \frac{\text{Total Debt}}{\text{Total Equity}} \) (2)

C. Firm Size

[3] stated that

"Size of the firm in relation to the market smaller firms are much more likely to earn excess returns and maintain them than otherwise similar larger firms. This is so because they have more room to grow and a larger potential market. When looking at the size of the firm, we should look not only at the firm’s current market share but also the potential growth in the total market for its products or services. Thus, Samsung may have a large market share of the smart phone market, but it may be able to grow in spite of it because the entire smart phone market is growing. On the other hand, Boeing dominates the market for commercial aircraft, but we do not expect the overall market for aircraft to increase substantially. Boeing, therefore, is far more constrained in terms of future growth."

From these statements can be concluded that companies with small sizes have the opportunity to grow larger so that stock prices can increase, another case with large-sized companies hope for rising stock prices is very small.

[7] illustrates the size of a company with working capital. Small companies tend to have higher working capital compared to large companies. The composition of current assets and current liabilities for large and small companies may consist of 65.5% current assets and 32.2% of current debt for small firms. While the composition for large companies are 31% current assets and 24.4% current liabilities. Some possible answers to the phenomenon: (1) Large companies are becoming more intensive, (2) Large companies have economies of working capital, or relatively stable cash flow, and (3) Large companies have better access to financial markets, so no need to hold more working capital.

D. Corporate Performance

[14] defined “Return On Assets (ROA) is measure of profit per dollar of assets.” From this definition confirms that ROA is a measure of the company's performance on the profit generated from assets owned per unit of currency. [13] defined “ROA tells us how much profit company is able to generate for each dollar of assets invested.” The definition explains that ROA is a measure of company performance in generating profit from the assets invested.

[9] that Return On Investment (ROI) or Return On Assets is a ratio that shows the return (return) on the amount of assets used in the company. ROI is also a measure of management effectiveness in managing its investments.

E. Liquidity.

[14] stated that,

"liquidity refers to the ease and quickness with which assets can be converted to cash (without significant loss in value). Current assets are the most liquid and include cash and assets that will be turned into cash within a year from the date of the balance sheet. Account receivable are amounts not yet collected from customers for goods or services sold too them (after adjustment for potential bad debts). Inventory is composed of raw materials to be used in production, work in process, and finished goods."

[13] stated that,

"Since both current assets and current liabilities have comparable duration, the current ratio is a key to index of a firm’s short-term liquidity. Analysis view a current liabilities from the cash realized from its current assets. However, the firm can face a short-term liquidity problem even with a current ratio exceeding one when some of its ability to cover its current liabilities from liquid assets.”

Fred Weston in [9] stated that the ratio of liquidity (liquidity ratio) is a ratio that describes the ability of companies to meet the obligations (debt) short-term. This means that if the company billed, it will be able to meet the debt (pay) is primarily debt that has matured.

[13] formulate Current ratio as follows:

\[ \text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \] (4)

Moderate Liquidity with Working Capital and Leverage. [9] states that one of the important values of the company's liquidity is to meet the amount of funds needed in times of need. The inability of the company to meet its liquidity will affect its business activities. Meanwhile, in working capital management the need for funds is also an important part, both in terms of provision of funds, as well as the use of funds related to business activities. Therefore, there is a close relationship between liquidity and working capital.
[3] explains that in the liquidity and solvency issues investors recognize the condition and situation of the company's financial capacity in solving its problems quickly and well. Liquid and solvable is where a company is declared healthy and in good condition because it is able to pay off its short-term obligations and also able to pay off its debts that mature in a timely manner. In this position, the company's stock is seen in good condition or constantly growing. That is, the financial and non-financial companies are considered not to have any problems and problems. One way of measuring a company's solvable level can be to use leverage ratios.

From the above two expert statements, it can be understood that the liquidity of a company has an important relationship in a decision whether the working capital management and funding decisions with debt. 

Research Framework and Hypothesis Formulation

Based on the description above, the core of this study is how the influence of working capital, leverage, firm size and liquidity partially to corporate performance and analyze how much liquidity strengthen or weaken the influence of working capital and leverage to corporate performance. This is supported by previous research which states that working capital, leverage, firm size, and liquidity. So the authors can formulate the research hypothesis:

- **H1**: Working capital positive influence to corporate performance
- **H2**: Leverage negative influence to Corporate Performance
- **H3**: Firm Size positive influence to Corporate Performance
- **H4**: Liquidity positive influence to Corporate Performance
- **H5**: Working Capital, Leverage, Firm Size, Liquidity positive influence to Corporate Performance
- **H6**: Liquidity influence moderation between Working Capital and Corporate Performance
- **H7**: Liquidity influence moderation between Leverage and Corporate Performance

III. RESEARCH METHODS

A. Object of research

In this research the object of research is divided into three variables. Dependent variable has research object in the form of corporate performance, whereas in independent variable have research object in the form of working capital, leverage analysis, and firm size. The moderator variable in this research is liquidity. While the influence of working capital, leverage analysis and firm size in question is the working capital management, debt financing decisions and the size of a company. Corporate performance in this study includes measurement of return on assets (ROA) of a company. 

This research is a quantitative research. According to [15] based on the purpose of research are grouped into two basic research (basic research) and applied research (applied research). Research based on the level of explanation is grouped into three namely descriptive, comparative, and correlational. In this study includes correlational or associative research conducted to find the relationship or influence of one or more independent variables with one or more dependent variables with the type of correlation of causal relationships.

The population design used in this study is the list of companies entered in LQ45 period February 2013 to February 2016. Researchers chose LQ45 companies that have a fixed status within the study period. LQ45 category of companies in this research includes public companies (issuers), State Owned Enterprises (BUMN), Private Enterprise (BUMS), Financial Institutions Bank and Non-Bank.

In the sample of this study were 29 companies registered in LQ45 period February 2013 until February 2016 selected by purposive method.
B. Analysis Method

In this study, the authors use secondary data sourced from the stock exchanges of Indonesia. Analysis and data processing performed by using computerized application with Lisrel 9.1 student version software.

The validity test technique used in this research is Pearson correlation (Pearson Correlation) where the significance test is done by criterion of positive value of sig 2-tail value from total score <0.05 and t value from t table 1.97427 where degree of freedom (df) = 174 - (6 + 1) = 167.

IV. RESEARCH RESULTS AND DISCUSSION

In this study, the data used as a source of analysis has been tested multicollinearity. Multicollinearity testing is an absolute requirement that must be done. [17] In addition to the correlation method, Lisrel 9.1 has provided additional option to detect multicollinearity ie with condition number. The condition number above 30 indicates the presence of serious multicollinearity symptoms. In result of data processing, the value of condition number is 23,972. Thus, the data in this study were stated free of symptoms of multicolinearity.

Here is a causal relationship or indirect effect between variables tested in this study:

| TABLE I. COVARIANCE MATRIX |
|-----------------------------|
| Variabel | WKT | LEV | FSZ | CP | LKD | WKT* LKD | LEV* LKD |
|--------|-----|-----|-----|----|-----|---------|---------|
| WKT    | 1.085 |     |     |    |     |         |         |
| LEV    | -0.303 | 0.802 |     |    |     |         |         |
| FSZ    | -0.364 | 0.041 | 0.746 |    |     |         |         |
| CP     | 0.040 | -0.15 | -0.026 | 0.009 |     |         |         |
| LKD    | -0.042 | -0.503 | -0.251 | 0.012 | 1.232 |         |         |
| WKT* LKD | 0.923 | -0.742 | -0.545 | 0.050 | 0.922 | 2.092   |         |
| LEV* LKD | -0.513 | 0.695 | 0.586 | -0.025 | 0.178 | -0.416 | 2.392   |

From the table I, it can be interpreted that working capital has the strongest correlation with firm variable independent variable that is equal to 36.10% with a strong enough correlation value. Leverage has the strongest relationship with liquidity variable that is -50.30% with strong correlation value. Firm size has closeness to other variables that is with the liquidity of the correlation value is strong enough equal to -25.10% while the dependent variable has the greatest correlation relationship with leverage variable of -15% with very weak correlation value.

The following is the result of data processing which shows the significant level of each independent variable to corporate performance that is:

From the table II, it can be interpreted that working capital has a significant effect on corporate performance with a coefficient of 2.22%, can be interpreted every increase of Rp. 1, - on working capital it will increase return on assets by 2.22%. So it can be understood if a company that is able to manage its working capital well can give positive impact in the form of increase return for investor. Firm Size has a significant influence on corporate performance with a coefficient of 0.5% with a negative or opposite direction. It can be understood the larger the size of the company the possibility of return will be smaller.

Leverage has no effect on corporate performance. This can be understood as an indication for companies that have high liquidity value using the majority of funding that is dominant comes from capital while the liquidity variable also has no effect on corporate performance. The same indication occurs in the case of this variable where the company has sufficient funds to finance the business activities of the company.

The moderation variable in this research is the multiplication of working capital with liquidity shows that the moderation variables strengthen the working capital relationship to the corporate performance with positive value while the moderation of liquidity has weakened the influence of leverage on corporate performance with a negative value.

Here is the result path analysis from the study according to table II:

![Fig. 2. The causal relationship between the research variables](image-url)
From the results of data analysis using lisrel 9.1 student version, the following is the estimated equations given:

\[
CP = 0.0347 + 0.0222\times WKT + 0.0207\times LEV - 0.0224\times FSZ + 0.00523\times LKD + 0.0126\times WKTLD - 0.00425\times LEVLKD + \text{Error},
\]

\[R^2 = 0.218\] (5)

Based on the equation (5), the coefficient of determination value (R2) is 21.80%. It can be interpreted that the influence of working capital, leverage, firm size, liquidity and moderation to corporate performance is only 21.80% while the rest is influenced by other factors that strengthen the amount of return or corporate performance.

V. CONCLUSIONS AND SUGGESTIONS

Working capital has a positive effect on corporate performance; firm size has a negative effect on corporate performance. Leverage and liquidity have no effect on corporate performance. Liquidity as a moderating variable indicates an indication of strengthening the influence of working capital on corporate performance while liquidity weakens the influence of leverage on corporate performance.

This study is limited to four independent variables with an influence value of 21.80%. So the researcher hopes for the next researcher can find other variables that have greater influence on corporate performance. For company management, the amount of return should be considered based on all components of the existing financial statements while maintaining the existence of existence on the LQ45 list.

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