The Indonesian Capital Market Review

Volume 10
Number 1 *January*

Article 5

1-30-2018

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Indonesian Capital Market Review 10 (2018) 37-48

INDONESIAN
CAPITAL MARKET REVIEW

Sensitivity of Liquidity, Investment Decision, and Financial Constraints

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(Received : December 2017/ Revised : February 2018 / Accepted : February 2018/ Available Online : March 2018)

This research aims to test the sensitivity level of liquidity and investment opportunity to investment decision between non-financially and financially constrained firms. The sampleon this research is the firms of Jakarta Islamic Index listed on Indonesia Stock Exchange from period 2011 to 2015. There are 13 sample firms obtained with 65 observations. This research uses moderating regresssion analysis. Independent variable is liquidity and investment opportunity, dependent variable is investment decision, moderating variable is financial constrains, and variable control is debt.This research classifies non financially constrains (NFC) and financial constrains (FC) firms into four steps by observing dividend policy, cash flow, debt (leverage), and investment opportunity. The result of research refers that liquidity and investment opportunity have a positive influence to investment decision. Liquidity is more sensitive to investment decision for financially constrained firms. Investment opportunity is more sensitive to investment decision for non-financially constrained firms. The result of robbusness test using sample of the firms LQ 45 period 2011 to 2015 with 23 sample firms obtained with 115 observations also shows the same result and consistent with sample firms in Jakarta Islamic Index.

Keywords: *Liquidity; Investment decision; Financial constraints.*

JEL Classification: G32; C22

Introduction

Modigliani and Miller (1958) stated that under a perfect market condition, there is no relationship between investment decisions and financing decisions. Accordingly, Brigham and Ehrhardt (2013) also stated that while the perfect market assumption is eliminated, the separation between investment decisions and financing decisions still occurred despite the slight modifications taking example managers should use the weighted average capital cost as a discount rate. Even when capital structure has become relevant, whether due to tax factors or due to other factors, there is still no a direct relationship between investment and financing. What exists is that the investment program is decided first then followed by financing. In order for investment decisions are really aimed at

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maximizing the firm value, so investment decisions should be independent of financing decisions.

However, the results of empirical research conducted by Bassetto and Kalatzis (2011), Bayraktar (2014), Fazzari, Hubbard, and Petersen (1988), and Kaplan and Zingales (1997), showed that there was a relationship between liquidity with investment decisions. The empirical evidence in Indonesia was shown by Agung (2000) and Prasetyantoko (2007) where there was a relationship between liquidity with investment decisions. From the above empirical findings, it shows that there is a difference between the theory that the two factors of investment decisions and financing decisions are independent towards the practice of the firm.

In addition, the results of Bayraktar (2014) and Fazzari et al. (1988) showed the difference in findings of the sensitivity of firm investment decisions with liquidity when moderated by financial constraints with the research results by Bassetto and Kalatzis (2011) and Kaplan and Zingales (1997). The results of Bayraktar (2014) and Fazzari et al. (1988) indicated that the firm's investment decision was more sensitive to liquidity in the financially constrained firm hereinafter abbreviated FC, compared to nonfinancially constrained company hereinafter abbreviated as NFC. In contrast, Bassetto and Kalatzis (2011) and Kaplan and Zingales (1997) found that investment decisions were more sensitive to NFC liquidity than FC firm.

Some previous studies used different financial constrains measurements, such as a study conducted by Bayraktar (2014) measured financial constrains using dummy variables, namely size of capital stock (high and low), number of laborers (few and many), dividend payout ratios (high and low), dividend to capital ratios (high and low) bond rating (no bond rating and bond rating), total debt to capital ratio (high and low), KZ Index. This research classifies NFC and FC firms using four steps: dividend policy, cash flow, debt, and investment opportunities. Bassetto and Kalatzis (2011) measured financial constrains using dummy variables of financial indicators, i.e cash holding (high and low) profitability (high and low), cash flow (high and low), debt (high and low), and sales (high and low). Fazzari et al. (1988) classified the sample of financial constrains into three categories, i.e the dividend payout ratio of low (<10%) or grade 1 to high (20%) or grade 3. Kaplan and Zingales (1997), where samples were classified into five groups from financial constrains were low to high with the approach of objective multivariate classification function.

In contrast to previous researches, this study classifies NFC and FC firms into four steps by observing dividend policy, cash flow, debt (leverage), and investment opportunity. As previously described, there is a difference in the level of liquidity effect on investment decisions when moderated by financial constrains, and when using different financial constrains measurements. Based on the differences in previous research results and measurement differences, this study is intended to do reconciliation for liquidity influence level and investment opportunity on investment decision by putting in variable of FC and NFC as the moderator.

In the next section, we provide a theoretical overview of the previous studies. The research methodology is described in the next section, followed by the discussions related to liquidity, investment opportunities, investment decisions, financial constraints and the relationship between these factors. Finally, we present the conclusions of the study.

Literature Review

There are three aspects that focus on analysing the factors that influence investment decisions. The aspects are: 1) liquidity aspect; 2) investment opportunities; and 3) aspects of financial contrains. In a perfect and complete capital market, investment decisions are not affected by the way firms finance themselves (Modigliani and Miller, 1958), which indicated that to maximize value, the company will implement an investment project until its marginal revenue equals to its marginal cost. However, an empirical evidence suggests that there is an independence between investment decisions and financing decisions, in which there is a connection between liquidity level and investment

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DOI: 10.21002/icmr.v10i1.10872

level in many firms.

The investment decision made by firm is influenced by the ability of firm in making cash that is able to fulfil the long-term and short-term need. It is commonly called as firm liquidity. Firm should keep its liquidity to avoid any disturbance on the firm activity process to have investment and not to lose any trust from the external party. Liquidity is an ability of a firm to fulfil its obligation especially short-term obligation (Brigham & Ehrhardt, 2013). According to Fazzari et al. (1988), liquidating firm is a firm that has a big power so it is able to fulfil any of its obligation, this paying ability relates to production process establishment.

Kaplan and Zingales (1997) referred that liquidity is the firm's ability to generate cash to meet the needs of both long-term and short-term firm. The definition explicitly shows whether with the available cash firm experiences some obstacles in finance its investment or not. A firm is called having no problem in financing its investment only if the firm can make cash to finance its investment.

One proxy of liquidity is cash flow. Cash flow consists of cash inflows and outflow cash flow. Outflow cash is usually used to make new investments, while cash flow is the result of the investment. Brigham and Ehrhardt (2013) stated that the cash flow statement is a report that describes the impact of the firm's operating, investing and financing activities on cash flows during one accounting period.

Géczy et al. (1997) stated that firm cash flow with high volatile level has expenditure, research cost and development, and cheaper advertisement cost. It means that the existing investment level difference will make a different volatility, depends on the firm investment goal. Firm doesn't usually use debt or equity market to make cash flow not sharp, because the cost getting in the capital market also relates to firm cash flow volatility.

Several studies examining the relationship between liquidity and investment decisions were made by Agung (2000), Almeida and Campello (2007), Ameer (2014), Bayraktar (2014), Carpenter and Guariglia (2008), Chen, Cao, Zhang, and Dickinson (2013), Črnigoj and Verbič (2014) Fazzari et al. (1992), Kim (2014), Ogawa (2015), Prasetyantoko (2007), and Quader (2016). All the studies except Prasetyantoko (2007) found that there is a correlation between those two variables. In particular, by observing Indonesia market, Agung (2000) found that liquidity has a positive correlation to investment decision. However, Prasetyantoko (2007) in his research showed that liquidity is negatively related to investment decision in Indonesia market. Therefore, the first hypothesis in this study is that liquidity is positively related to investment decision.

Myers (1977) argued that investment opportunity is a combination between assets in place and investment choice in the future with positive net present value (NPV). The assets affiliated with the investment will influence on capital structure. Gaver and Gaver (1993) stated that investment opportunity is a firm value which its amount depends on expenditure determined by management in the future, in this case the expected investment choices will make a higher return.

In addition, Chung and Charoenwong (1991) stated that the essence essential growth of a firm is the existing investment opportunity that is more profitable. If there is a profitable investment opportunity, manager will try to take the opportunities to maximize the prosperity of stockholders. It is caused by the more investment that is profitable, investment done will be higher.

One proxy in measuring investment opportunities is the book to market ratio. The ratio of book to market is the ratio of book value to stock price. Firms that have a high book to market ratio indicate as a good firm's future growth cycle, so it will have a high investment opportunity, hence the firm will be easy to invest because investors will be interested to buy the company's shares (Hovakimian and Hovakimian, 2009).

Some previous studies had observed the impact of investment opportunity to investment decision. Ameer (2014), Bayraktar (2014), Chen and Chen (2012), Cull et al. (2014), Fazzari et al. (1988), Guariglia and Yang (2016), Kaplan and Zingales (1997), and Prasetyantoko

(2007) found evidence that investment opportunity is positively influence investment decision. Thus, the second hypothesis in this study is investment opportunity positively influences investment decision.

According to Myers and Majluf (1984) central proposition with capital information asymmetric base is very expensive. Myers and Majluf (1984) further explained that dividends are sticky, meaning that dividend increases are made when managers are confident of providing sufficient permanent (internal or external) cash flow in the future. A dividend reduction is made when the firm faces high financial constraints, externally feels unable to maintain sufficient permanent cash flow to finance investment. That is why financially constrained firm relies much on internal financing source. It tend to adjust dividends based on available investment opportunities.

Managers prefer to use internal capital to finance investments because internal capital can reduce the involvement of oversight from shareholders or external parties to investment decisions made by managers (Jensen & Meckling, 1976). Fazzari et al. (1988) stated that financially constrained companies tended to be more sensitive to internal funding (liquidity) in investing. This tendency is due to the information asymmetry of external financing, so that external financing (debt) is more expensive than internal financing which results in financially constrained firms lacking access to external financing sources.

Research result from Ameer (2014), Bayraktar (2014), Carpenter and Guariglia (2008), Chen et al. (2013), Črnigoj and Verbič (2014), Fazzari et al. (1988), George et al. (2011), Guariglia and Yang (2016), Kim (2014), Ogawa (2015), and Quader (2016) showed that firm investment decision is more sensitive on liquidity compared by NFC firm. Instead, research result from Kaplan and Zingales (1997), supported by Bassetto and Kalatzis (2011), Chen and Chen (2012), and Cull et al. (2014), showed that investment from NFC firm is more sensitive towards liquidity compared with FC firm investment. However, empirical evidence in Indonesia by Agung (2000) found that the existing liquidity has a positive relation with investment decision. Furthermore, Prasetyantoko (2007) showed that liquidity negatively influences on investment. Referring to these earlier findings, the third hypothesis in this study is liquidity influences more toward investment decision on financially constrained firm than non-financially constrained firm.

Dividend policy and investment opportunities is a management control mechanism that can be substitutionally more dependent on the availability of internal financing sources than external financing sources through investment opportunities (Jensen & Meckling, 1976). A firm that has a high internal financing source is controlled through high dividend payment so that the firm can be classified as NFC. Thus, NFC firm can easily adjust the financing source for investment that shows higher financial flexibility and tends to have an easy access to external capital market; in other words, NFC firm shows higher result (Bhandari, 1988; Chan & Chen, 1991; Fama & French, 1992).

Morever, Prasetyantoko (2007) in his research showed that investment opportunities positively influences on investment decision. In addition, Ameer (2014), Bayraktar (2014), Chen and Chen (2012), Cull et al. (2014), Guariglia and Yang (2016), and Kaplan and Zingales (1997) found that investment decision of NFC firm is more sensitive on investment opportunity than on FC firm. Instead, Almeida, et al (2004) showed that investment opportunity is more sensitive on FC firm than on NFC firm. By the assumption, the hypothesis which explains investment opportunity influences more on investment decision on non-financially constrained firm than financially constrained firm is the fourth hypothesis in this study.

Research Methods

Data in this research are firm financial statements from 2011 to 2015. The population of this study is Jakarta Islamic Index that listed on Indonesia Stock Exchange (IDX). The data are obtained from IDX and ICMD (Indonesia Capital Market Directory). The sample distribution criteria in this study are Jakarta Islamic Index

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DOI: 10.21002/icmr.v10i1.10872

listed in IDX that published its financial statements from 2011 to 2015 consistently.

Independent variables in this study are liquidity that got the proxy with cash flow and investment opportunity got the proxy with book to market value. Cash flow is measured by dividing net income and depreciation to net fixed assets, while book to market value is obtained from book value divided with market value. On the other side, the dependent variable of this study is investment. Investment in this study is obtained from net capital expenditure which is calculated by fixed assets in period t minus fixed assets in period t-1 then divided them with net fixed assets.

Moreover, moderating variables in this study were financial constraints that were classified into two parts, non-financially constrained (NFC) and financially constrained (FC). This study classifies NFC and FC firms into four steps by observing dividend policy, cash flow, debt (leverage), and investment opportunity. In first classification, associated with dividend policy, Almeida, et al. (2011), Baños-Caballero et al. (2014), Bayraktar (2014), Fazzari et al. (1988), Kaplan and Zingales (1997) used dividend payout ratio as their approach. Firms with low dividend level were categorized as FC firms, while high dividend level firms were categorized as NFC. Fazzari et al. (1988) stated that there were two possible explanations for why firms pay low dividends. First, firms face the cost of expensive external financing sources because of the information asymmetry that uses most of the profits to finance their investments rather than paying high dividends. Second, the firm does not earn enough profit to pay dividends. Firms paying dividends are included in the NFC category, while firms that do not pay dividends are included in the FC category.

The FC firms that cannot pay the dividend don't mean that they have no ability to do that, but there might be the other needs such as having investment. So, it needs a second classification which is by considering cash flow. On the second classification, as used by Bassetto and Kalatzis (2011), Chen and Chen (2012), and Rousseau and Kim (2008), the firm that has a higher bigger cash flow from the cash flow average of all samples is categorized as NFC. While the firms that have smaller cash flow from the cash flow average of all samples are categorized as FC. The firm with the big cash flow tends not to have a financing problem, however, firm with the smaller cash flow tends to have obstacles in its financing.

In order to obtain the accurate classification of NFC and FC firm, the financially constrained firm in the second classification are followed by the third classification by looking at investment opportunity that belongs to the firm. here gets proxy with book to market ratio as used by Hovakimian and Hovakimian (2009) in classifying FC and NFC firms. A firm is categorized as NFC if its book to market ratio is lower than the average book to market ratio of all samples. On the other hand, a firm is categorized as FC if its book to market ratio is higher than the average of all samples. A firm with a low book to market ratio means the company has a book value lower than its market value, in other words, the firm has a market value that is higher than its book value that reflects the NFC firm. Thus, the NFC firm can easily obtain the external financing sources because it has a high security value than its the book value, so that investors will be interested to buy the securities of the firm.

Furthermore, to be more convincing and obtain more accurate results in classifying NFC and FC firms, the financially constrained of the firms in the third classification are followed by the fourth classification as studied by Bassetto and Kalatzis (2011) and Hovakimian and Titman (2003), by observing the firm's debt. A firm that with high debt levels tend to be difficult to access external financing source and conversely firms with low debt levels tend to find it easier to access external financing source. Therefore, in this study, a firm with low debt ratio of all samples then is categorized as NFC firm and the firm with a higher debt ratio than the average of all samples debt ratio then is categorized as FC firm. All those four steps of classification can be clearly seen on Figure 1.

In Figure 1, D is dividend, CF is cash flow, BM is the ratio of book to market proxies of investment opportunities, Debt is borrowed fund, NFC is non financially constrained, and FC is

Figure 1. Financially Constrained and Non Financially Constrained of Firm's Classification

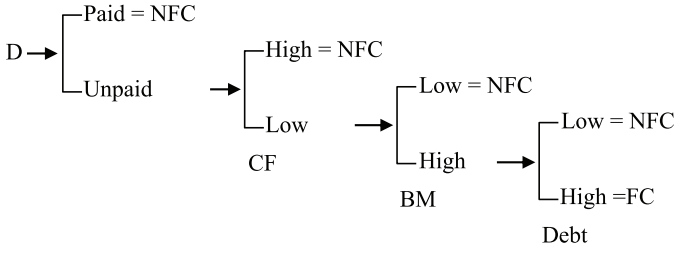
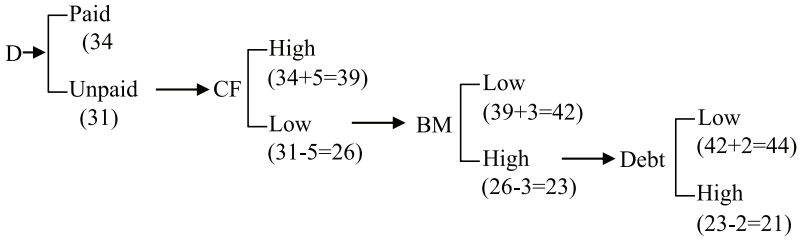


Figure 2. Classification Result of FC and NFC Firm



financially constrained. Thus, firms are categorized as NFCs when the firm pays dividend, has a high cash flow, low book to market, and low debt. Meanwhile, the firm categorized as FC if it doesn't pay dividend, has a low cash flow, high book to market, and high debt. Classification result categorized as FC and NFC could be seen on Figure 2.

Figure 2 shows the first classification observed from dividend payment status: there are 34 firm paying dividend and 31 that don't pay dividend. On the second classification, the firm that don't pay dividend are further classified as based its cash flow condition; on this step it shows that firm that has higher cash flow than the sample average increases from 5 to 39 and the one that smaller than the average decrease from 5 to 26 firm. On the third classification, a firm with low cash flow is re-observed its book to market, classification result shows, the number of firms with lower book to market from the sample average increase from 3 to 42 firm, meanwhile firms that have higher book to market from the average decreases from 3 to 23 firms. On the last classification, firm with high book to market is re-observed its debt, classification results show that firm lower debt than the sample average increases from 2 to 44 and firm with debt above the sample average decreases from 2 to 21 firm, while firm categorized as NFC are 44.

This study also uses controlling the variable which is debt measured by total of debt divided by total of equity. The empirical model in this study is:

$$INV_{it} = \beta_0 + \beta_1 CF_{it} + \beta_2 BM_{it} + \beta_3 D_{it} + \beta_4 CF_{it} * D_{it} + \beta_5 BM_{it} * D_{it} + \beta_6 DER_{it} + u_{it} \quad (1)$$

Where INV is the investment on capital expenditure that is divided by fixed assets, CF is cash flow divided by fixed assets as a proxy of liquidity, and BM (book to market) is a proxy for investment opportunity. In addition, as moderating variables, D is the dummy of FC and NFC firm variable (1 is for FC variable and 0 is for NFC variable), CF*D is the interaction between CF with dummy variable, while BM*D is interaction between BM and dummy variable. Moreover, DER (debt to equity ratio) is used as controlling variable. Note that in this equation, cash flow and investment are divided by fixed assets in order to control firm scale different effect. Index i shows the firm and t is period (time).

Results and Discussions

According to the sample distribution criteria, we obtain 17 firms that were listed in Jakarta Islamic Index during 2011 to 2015. Since four firms have negative cash flow and investment (outlier), we only study further 13 firms. Table 1 shows sample distribution process.

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DOI: 10.21002/icmr.v10i1.10872

Table 1. Sample Distribution Process

Criteria	Number of Firm
1. The firms informed in Jakarta Islamic Index Listed in IDX and publish its financial statement from 2011 to 2015 consistently	17
2. Taken out because the data is outlier*)	(4)
Number of sample obtained	13

note:
*) the value of cash flow and investment is negative

Table 2. The Result of Difference Test FC and NFC's Firm

Variable	Mean *FC*	Mean *NFC*	Difference of Mean	t value
CF	1,3651	1,4727	-0,1076	2,719 ***
BM	0,5106	0,4577	0,0528	2,985 ***
DER	0,7337	0,6681	0,0655	3,213 ***

note:
*** shows significance level on 1% (or t-value 2,660).
CF (cash flow divided fixed assets) and BM (book value divided by market value) used are in multiplication, while DER (total debt divided by total equity) is in percent.

Table 3. Hypotheses Test Results

Independent Variable	Coefficient	t-value
Constant	3,336	4,834 ***
CF	0,130	2,536 ***
BM	0,409	1,864 **
D	-0,063	-1,796 ***
CF*D	0,142	3,320 ***
BM*D	-0,147	-1,754**
DER	-0,004	0,934
R^2	0,512	

note:
Estimation is done by using data panel estimation technique: fixed effect model
** and *** show significant 5% (or t-value 1,676) and 1% (or t-value 2,403), respectively.
CF (cash flow divided by fixed assets) is proxy of liquidity and BM (equity book value divided by equity market value) is proxy of investment opportunity which is independent variable, D (dummy variable, 1 for FC firm, 0 for NFC firm); CF*D (interaction between CF with dummy of financial constrains firm) and BM*D (interaction between BM with dummy of financial constrains firm) which is moderation variable; and DER (total debt divided by total equity) is controlling variable.

From four steps classification explained earlier, to know whether FC and NFC firms is statisically different, we use difference test with independent sample t test. The results of FC and NFC can be seen on Table 2. The result of FC and NFC difference test can be seen on Table 2, we obtain that, statistically, average between FC and NFC firms on CF, BM and DER variables are different. Furthermore, negative coefficient symbol on CF showed that NFC firm cash flow is higher than FC firms, meanwhile positive BM and DER variables which means that book to market and debt of FC firm is higher than NFC firm.

Result of hypotheses test in this study can be seen in Table 3. Table 3 showed that the 4 proposed hypothesis in this study are supported by estimation result. The research result showed that hypothesis 1 and 3 were significant on level 1% which in this case CF variable had a positive coefficient, meanwhile moderation variable CF*D which interaction between CF with dummy FC firms had a positive coefficient. In addition, hypothesis 2 and 4 were significant on level 5%, which confirms that BM variable had a positive coefficient while moderation variable BM*D which was interaction between BM with dummy of NFC firm had a negative coefficient. Nevertheless, it should be underlined that determination coefficient (R^2) of model was not large enough amounting 0,512 that showed 51,2% investment decision variation could be explained by variation from six independent variables CF, BM, D, CF*D, BM*D, and DER and the rest (48,8%) was explained by other causes beyond the model.

A firm having high liquidity has a chance to invest more in capital expenditure that is an in-

vestment in fixed assets such as land or property, buildings, and equipment. However, a firm with high liquidity is sensitive to agency conflicts. According to the agency theory that managers prefer to use internal capital to finance investments because internal capital can reduce the involvement of oversight from shareholders or external parties to investment decisions made by managers. Managers tend to choose projects that outsiders find difficult to monitor, thereby it is allowed to the managers to make decisions that benefit them. Managers also prefer to keep free cash flows instead of distributing them to shareholders. The higher the free cash flows the greater the freedom of managers in controlling the firm resources.

Hypothesis 2 states that the firm's investment decisions are actually closer to the investment opportunities owned by the firm. The result of hypothesis 2 in this research supported the statement. In this case, there was a positive investment opportunities influencing on investment decisions. is in line with research result of Ameer (2014), Bayraktar (2014), Chen and Chen (2012), Cull et al (2014), Fazzari et al (1988), Guariglia and Yang (2016), Kaplan and Zingales (1997), and Prasetyantoko (2007). Gaver and Gaver (1993) explained that investment opportunity was a firm value with amount depending on expenditure determined by manager in the future, in this case investment choices expected to make a higher profit. If there is a profitable investment opportunity, manager would try to take those opportunities to maximize the stockholder's prosperity. The more profitable investment opportunity, the more investment done by a firm.

In addition, the effect of liquidity and investment opportunities on investment decisions will be different when moderated by FC and NFC firms, as shown by hypotheses 3 and 4. The results of hypothesis 3 show that liquidity is more influential on investment decisions in FC firm than NFC firm. According to Fazzari et al. (1988) due to the information asymmetry of external financing, letting that external financing such as debt is more expensive than internal financing, which means that FC firm have less access to external financing sources. Beside, FC firm is relatively smaller, indicating financial constraints that will make it difficult for firm to take advantageous investment opportunities for investment. In other words, FC firms have low corporate value. Thus, FC firm tend to be more sensitive to liquidity in investing. This evidence is supported by research of Ameer (2014), Bayraktar (2014), Carpenter and Guariglia (2008) studies, Chen et al. (2013), Črnigoj and Verbič (2014), Fazzari et al. (1988), George et al. (2011), Guariglia and Yang (2016), Kim (2014), Ogawa (2015), and Quader (2016).

Instead, the result of hypothesis 4 indicates that investment opportunities have more influence on investment decisions on NFC firms than FC firms. The results of this study dealt with Ameer (2014), Bayraktar (2014), Chen and Chen (2012), Cull et al. (2014), Guariglia and Yang (2016), and Kaplan and Zingales (1997), which found that investment decisions of NFC firms were more sensitive to investment opportunities than FC firms. Dividend policies and investment opportunities are management control mechanisms that can be substitutionally more dependent on the availability of internal financing sources than external sources of financing through investment opportunities (Jensen & Meckling, 1976). The firm that have high internal financing sources are controlled through high dividend payouts so that these firms can be classified as NFC. Thus NFC firm can easily adjust financing sources for investments that exhibit greater financial flexibility and tend to have easier access to external capital markets. In other words, NFC firm show high firm value (Bhandari, 1988; Chan & Chen, 1991; Fama & French, 1992). This means that NFC firm are more sensitive to investment opportunities in investing.

Robustness Test

To prove that we are in the classification of financial constrains, firm uses four steps by observing at dividend, cash flow, investment opportunity and debt is correct and consistent, so we do robbusness test by using the sample listed in LQ 45 firm period 2011-2015. We obtain samples 23 firms with 115 observations. After

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DOI: 10.21002/icmr.v10i1.10872

Table 4. Robustness Test's Result

Independent Variable	Coefficient	t-value
Constant	0,187	6,035 ***
CF	0,049	2,163 **
BM	0,043	1,938**
D	-0,291	-2,532 ***
CF*D	0,130	1,676 **
BM*D	-0,199	-2,132**
DER	0,033	0,811

note:
Estimation is done by using data panel estimation technique: fixed effect model
** and *** show significanton 5% (or t-value 1,659) and 1% (or t-value 2,364), respectively.
CF (cash flow divided by fixed assets) is proxy of liquidity and BM (equity book value divided by equity market value) is proxy of investment opportunity which is independent variable, D (dummy variable, 1 for FC firm, 0 for NFC firm); CF*D (interaction between CF with dummy of financial constrains firm) and BM*D (interaction between BM with dummy of financial constrains firm) which is moderation variable; and DER (total debt divided by total equity) is controlling variable

the classification of FC and NFC, FC firms samples 35 and NFC firms amounted to 80. The test results can be seen in Table 4.

Result of robbusness test by using sample of firm LQ 45 as table 4 above, it shows that liquidity and investment opportunity have positive influence to investment decision. In addition, the test result also find that liquidity is more sensitive to FC firm investment decisions than NFC, while investment opportunities are more sensitive to NFC firm investment decisions than FC. The test results show that by using different samples, the results are similar and consistent.

Conclusions

The results of this study can be concluded that: first, liquidity has a positive influence on investment decisions. This influence shows that with high liquidity, firms have the opportunity to invest more in capital expenditures. Second, investment opportunities have a positive influence on investment decisions. If there is a profitable investment opportunity, the manager will try to take these opportunities to maximize shareholder welfare, which also increases the firm value. Thus, the more profitable investment opportunity is the more investment will be done.

Third, liquidity has more influence on investment decision on FC firm than NFC firm. This is due to the information asymmetric on external financing, so that external financing such as debt is more expensive than internal financing which results in less FC firm having access to external funding sources. This shows that investment decision of FC firm is more sensitive to liquidity. Finally, investment opportunity is more influence on investment decision on NFC firm than FC firm. It occurs because NFC firm tend to have easier access to external capital markets so as to easily adjust financing sources for investments that exhibit greater financial flexibility. This means that NFC firm in investing are more sensitive to investment opportunities.

This research shows the existing positive influence of liquidity on investment decision. In other words, there is interdependency among financing decision, which are liquidity with investment decision on Indonesia firms especially the sample firm. The investment decision of the firm is closed to the investment opportunity. The results of this study support the statement, that there is a positive influence of investment opportunities on investment decisions on Indonesian firms especially for the sample firms.

When the influence of liquidity and investment opportunity to investment decision are included variable of FC and NFC as moderation variables, hence, the result of research shows that liquidity is more influence to investment decision on FC firms than on NFC firms. The implication is that FC firm tends to use liquidity to investment. This results also shows that investment opportunities is more influence on investment decision on NFC firms than FC firms. If there is a profitable investment opportunity, NFC firms will easily take the opportunity to investment. It occurs because NFC firms are easier to access external financing sources

because they have greater financial flexibility, more experience, and longer. Thus, in having investment NFC firms tend to be more sensitive to investment opportunities. Results of robbusness test by different sample show that are similar and consistent.

Limitations

It should be underlined this research has a limitation which is a development space for further research. The first thing is the number of limited samples, only 13 firms with 65 observations including on Jakarta Islamic Index listed in Indonesia Stock Exchange. For the next research, sample period can be longer and companies sector can be varied. Second, this research just uses two independent variables which are liquidity and investment opportunity. The future research needs to add other independent variables that are relevant such as debt, so that it can be compared between internal financing source and external financing source moderated by FC and NFC firms.

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