

The Influence of Leverage and Liquidity at Profitability with Investment Opportunity Set (IOS) as Intervening Variable – A Case study at manufacturing companies listed in Indonesian Stock Exchange in period 2013-2016

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Abstract-*The research aimed at knowing the influence of leverage and liquidity toward profitability with IOS as the intervening variable. The research samples were 71 companies listed in Indonesian Stock Exchange in period 2013-2016. Hypotheses testing by using structural equation model (SEM). Analysis results found that: Liquidity did not influence toward IOS. Leverage did not influence to the profitability. IOS influences positively toward profitability. Leverage influence positively toward IOS. Liquidity influence positively toward to the profitability.*

Keywords: *Leverage; Liquidity; IOS; Profitability*

1. INTRODUCTION

Bangun (1989:84)[4] found that the higher loan fund used to finance company the higher leverage ratio and the higher risk facing the company. the higher debt ratio to the asset, means the company has higher loan to finance the assets, otherwise, if the ratio is low means the higher assets financed by self own fund. Munawir (2002:239) found that Leverage ratio is ratio to measure how much asset financed from loan. Rizqia *et al.*, (2013)[28] said that leverage is measured by debt ratio toward total asset, that is ratio which measure the company assets financed by debt. In his research, Chandra Kumaramanglam and Govindasamy (2010)[7] have studied the impact of leverage toward profitability of the cement company in India. It explained the relationship between debt to equity ratio and profit per share and how effective the company use the debt financing. The research results showed that leverage, profitability and growth relate positively and leverage impact to the profitability of the companies.

Liquidity also become important consideration in case of investment, because the better liquidity position, the higher company finance health. Short term liabilities paid by the companies which suitable with the term determined, able to improve the trust from external and loan from external run normally and the company activities and the investment supported fully by external fund.

Idawati (2012)[17] has shown that liquidity is the company capability to fulfill the short term liabilities on time. Bhunia (2010)[5] has shown that liquidity play important role in determining the company effectiveness. So the company need to maintain the balanced liquidity ratio to fulfill their short term liabilities. Because the relationship with the operation is very important for external analysis to study the liquidity. Rahemanet et all, (2007) found that liquidity management is to maintain the trade off between liquidity and profitability. Research of Qasim Saleem & Ramiz Ur Rehman (2011)[26] by taking five years data from twenty six companies examined the relationship between liquidity and profitability, found there is positive relationship between liquidity and profitability. Research done by Wang (2002)[33] stated there is positive relationship between liquidity and operation performance. Seventeen years data from the samples company were taken. They examined relationship between profitability and information system. The research also stated the positive relationship between liquidity and profitability. A research done by Zhang (2011)[35] showed there is positive and significant relationship between liquidity and profitability.

Investment opportunity set (IOS) focus to the investment opportunity, either short term or long term. The suitable investment level, even longer than the expectation, able to improve the optimistic sense from the internal company. The better

investment, the better opportunities to improve competitiveness of the companies in various aspects. Company cycles become stable, with support of better investment opportunities and company capability in managing the debt to run their activities, and pay their short and long term liabilities and profitability can be managed well. IOS indirectly relate with leverage, liquidity and profitability. Companies have several investment opportunities, and need support from external fund to finance investment, and the capability of companies to repay the external fund loan. From the external fund owned by the company, able to take the existing opportunities, company will get profitability. IOS also support the payment of external fund in the future, because the external fund loaned, and paid on time, the repayment can be repaid by the company from the current investment, the current investment will impact the company profitability, the profitability can be directed to pay the external fund in the future. Astriani (2014)[3] has shown that the importance of investment decision to reach goals either short term, that is to produce maximum profit or long term to maximize the shareholder wealth that will be produced from the company investment activities. Gaver & Gaver (1993)[11] stated that investment choice in case project which are supported by research and development activities, beside that company ability in taking opportunities compared with other companies.

Profitability is a measuring rod of the company capability in managing well internally or externally. If company able to embody the suitable profit, then will facilitate all company activities and paying the short term and long term liabilities. According to Syamsudin (1992) in Putri (2009), found that company in their life should be profitable. In here he state that without profit difficult for the company to get capital from external parties. According to Munawir (1996), found that profitability is capability of company to produce profit during certain period. According to Weston (1999:232), has shown that profitability is the net final results from various policies and decision. Camelia, Burja (2011)[6] studied about the profitability impact of leverage, concluded that company use combined sources to finance activities and increase debt in certain level not influence the financial autonomy of company is the other way designed to improve asset capability to produce profit. From situation analysis, financial leverage action is profitable and act to increase ROA, the aspect justifies the company financial strategy through debt increase. Varsha, Virani (2010)[32] in their study about "impact of leverage to profitability of Pantaloon Retail India Ltd" have stated that financial decision relate to the

appropriate debt and equity combination choice in the capital structure. The conclusion is that company should reframe the capital structure and the capacity use for further capability in the future. Leverage impact positively and well toward profitability, and expected the reframing of capital structure and debt use able to increase company profit in the future.

Based on the study, the research will test and analyze the influence of leverage and liquidity toward profitability with investment opportunity set (IOS) as intervening variable.

2. THEORITICAL REVIEW

2.1 Leverage Relationship in IOS

Company beside has internal fund, they has external fund, loan from external parties. With the external fund, company able to maximize all available investment opportunities, develop and maintain the investment opportunities. Not only depend on the internal fund, recall to the need of daily or yearly activities of the company is high, the internal activities of company from the upstream to downstream also high, added with the investment opportunities set (IOS), of course need additional fund from external parties.

Leverage ratio depicting the operation fund source used by companies. Leverage ratio also showed risk faced by companies. Tarjo (2008)[31] found that the higher risk the higher uncertainties in the future to produce profit. By using debt to finance the company activities will trigger the company to improve their performance so able to produce more profit. With debt, companies have liabilities to pay the installment and the interest. The higher loaned fund to finance the company the higher leverage risk and the higher risk faced by the companies. Bangun (1989:84)[4] said that the higher debt to equity ratio means the companies have much loaned fund to finance their assets, on the contrary the lower the ratio, most of the asset financed by the itself fund.

According to Hardiningsih (2009)[13], has shown that IOS is current value from the companies choices to make investment in the future. Generally can be said that IOS depicting about the wide opportunities or investment for companies for the future interest.

Astriani (2014)[3] has shown that the importance of investment decision to reach short term goals, to produce maximum profit or long term profit to maximize the shareholder welfare through company investment activities. Gaver & Gaver (1993)[11] stated that investment choice just only at the project supported by research and development activities, beside that company capabilities in

taking the opportunities compared to the competitors.

H1: there is leverage influence to Investment Opportunity Set (IOS)

2.2 Liquidity Relationship in IOS

Companies must need loan from external parties, but companies should have capability to pay the short term liabilities. And company will get trust from external parties to get new loan, because the companies able to pay the short term liabilities (liquidity). And the loan is very important to be used for investment opportunities set (IOS), investment opportunities need huge fund, and need to loan fund from external parties, so the huge fund is collected and can be used for new investment development in the companies.

Idawati (2012)[17] found that liquidity is the company capability in fulfilling the short term liabilities on time. Bhunia (2010)[5] stated that liquidity play important role in determining the company effectiveness. And also it is needed for company to maintain the balanced liquidity ratio to fulfill their short term liabilities. Because it relationship with operation day, the day very important for internal or external analyst to study the liquidity.

Astriani (2014)[3] has shown that the importance of investment decision to reach short term goal, that is to produce maximum profit or long term goals to maximize the shareholder wealth through company investment activities. Gaver & Gaver (1993)[11] stated that investment choice in case project which are supported by research and development activities, beside that company ability in taking opportunities compared with other companies.

H2: there is liquidity influence in Investment Opportunity Set (IOS)

2.3 Leverage Relationship in Profitability

Company loan from external parties needed to finance various company activities, investment opportunities finance, and other company expenses. If all company activities are smooth, and investment develop well, then the company profit will increase sharply, and the profitability is the measuring rod for the company success in the future. To reach good profitability, it need loan so the all company activities and investment can develop well.

Bangun (1989:84)[4] stated that the higher loan to finance company the higher leverage ratio and the higher risk faced by the company. The higher debt to equity ratio means the company has used much loan to finance its assets, otherwise, if the ratio is low means the higher assets financed by self own fund. Munawir (2002:239) has shown that Leverage ratio is ratio to measure how much asset financed from loan. Rizqia *et al.*, (2013)[28] stated that

Leverage is measured by debt ratio toward total asset, that is ratio which measure the company assets financed by debt.

Chandra Kumaramanglam and Govindasamy (2010) have studied about the impact of leverage to profitability in cement companies in India. It explained about the relationship between debt to equity ratio & profit per share and how effective company in using the loaned fund. The research results showed that leverage, profitability and growth relate positively and leverage impact to the company profitability.

H3: There is leverage influence in profitability

2.4 IOS Relationship in Profitability

IOS which is maximized by company, such as, new product investment, investment of new branch / new factory, IPO investment to Stock Exchange, investment of company representative in abroad, and all investment opportunities run by the company, of course have return, and the return received by the company in the form of profitability. If the company does not implement the investment, it is difficult to obtain additional profitability, and the company development become stagnant from the period. Form, type, and composition of investment influence the profit in the future. Profit in the future which is expected from the investment can not be approximated certainly, because investment has risk. Risk and expected outcome from the investment will influence the achievement and company value.

Investment Opportunity Set (IOS) is introduced firstly by Myers (1977). Hasnawati (2005)[15] stated that investment opportunity set (IOS) is combination between asset in place and investment choice in the future with the positive net present value. Kallapur *et al.*, (2001)[19] found that IOS consist of investment choice, which may or may not taken by company. According to Hardiningsih (2009)[13], found that IOS is the current value from the company choice to make future investment. In general can be said that IOS depict about the wide investment opportunities for company, but depend on the expenditure choice of the company for the future interest.

Astriani (2014)[3] has shown that The importance of investment decision to reach goals either short term, that is to produce maximum profit or long term to maximize the shareholder wealth that will be produced from the company investment activities. Gaver & Gaver (1993) [11] stated that investment choice in case project which are supported by research and development activities, beside that company ability in taking opportunities compared with other companies.

Profitability is capability to obtain profit in percentage used to value how far the company able

to produce profit at acceptable level. Profitability stated in profit number after tax, investment profit, income per share, and sales profit. Profitability become the measurement norm for the company health.

According to Syamsudin (1992) in Putri (2009), found that company in their life should be profitable. In here he state that without profit difficult for the company to get capital from external parties. According to Munawir (1996), found that profitability is capability of company to produce profit during certain period. According to Weston (1999:232), found that profitability is the net final results from various policies and decision. H4: there is Investment Opportunity Set (IOS) influence in profitability

2.5 Liquidity Relationship in Profitability

Short term liability is the liabilities that should be paid on time as determined. The external loan if paid on time, then the external parties will has trust and facilitate the company to take loan for the second time, and the next time. With the smoothness of company in paying the short term liabilities, then the external loan become smooth, all company activities and the development become smooth, and profitability increase sharply.

Idawati (2012)[17] stated that liquidity is the company capability to fulfill the short term liabilities on time. Bhunia (2010)[5] found that liquidity play important role in determining the

company effectiveness. So the company need to maintain the balanced liquidity ratio to fulfill their short term liabilities. Because the relationship with the operation is very important for external analysis to study the liquidity. Rahemanet et all, (2007) found that liquidity management is to maintain the trade off between liquidity and profitability.

Research done by Bardia (2004) and Sur and Ganguly (2001) in the steel company of SAIL and aluminum industry showed that liquidity and profitability relate positively each other. The research of Qasim Saleem & Ramiz Ur Rehman (2011) by taking five years data from twenty six companies examined the relationship between liquidity and profitability, found there is positive relationship between liquidity and profitability. Research done by Wang (2002)[33] stated there is positive relationship between liquidity and operation performance. Seventeen years data from the samples company were taken. They examined relationship between profitability and information system. The research also stated the positive relationship between liquidity and profitability. A research done by Zhang (2011)[35] showed there is positive and significant relationship between liquidity and profitability.

H5: there is liquidity influence to the profitability

2.5.1 Hypotheses model

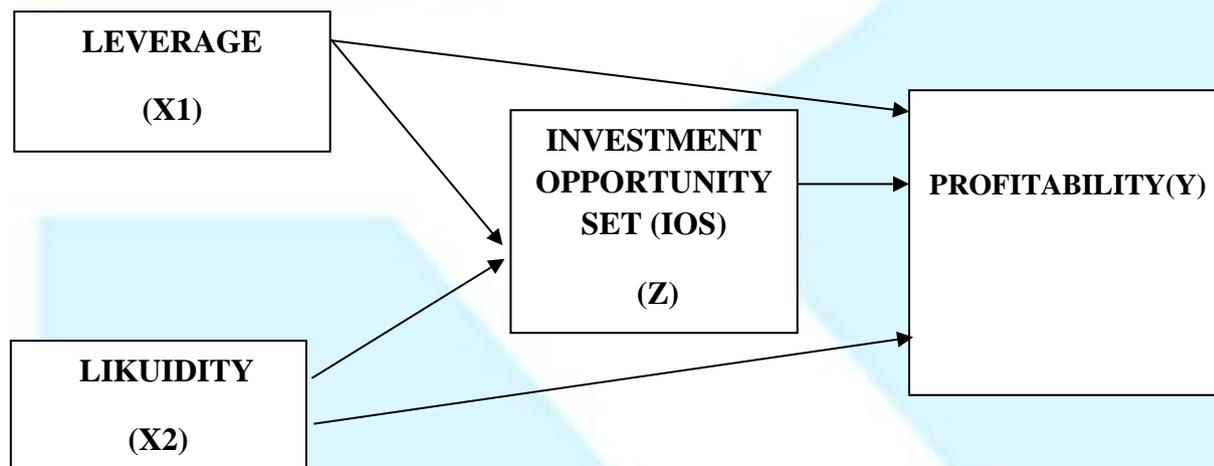


Figure 1 Hypothesis model

3. METHODOLOGY

Singarimbun (2006:4) [30] stated that the research method is explanatory research. The explanatory research done by explaining causal relationship between variables through hypotheses testing Sample taking by Purposive Sampling, sample amount for research is 71 manufacturing companies

listed in BEI in 2013-2016 and have fulfilled the criteria for the research.

Analysis by using Partial Least Square (PLS) by using software Smart PLS. According to Ghazali (2006)[12], found that PLS is alternative approach which shift from covariance based SEM to variance based. Covariance based SEM in general examine the causality / theory while PLS is predictive

model. Because of Chin (1998) found that PLS does not assume certain distribution for parameter estimation, then the parametric technique to test the parameter significance is not needed. Path diagram in PLS is used to know the relationship and value among variables.

4. RESEARCH FINDINGS AND DISCUSSIONS

4.1 Data Analysis of Smart PLS

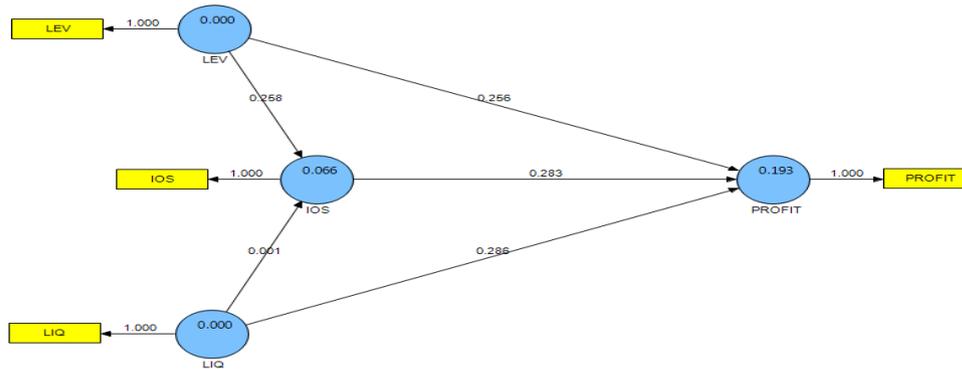


Figure 2 Path coefficient

Table 1 Path coefficient

Path Coefficients (Mean, STDEV, T-Values)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (O/STERR)	SIG P	HIPOTESIS
LEV -> IOS	0.257779	0.28044	0.049873	0.049873	5.168703	0	ACCEPTED
LIQ -> IOS	0.000993	0.02374	0.07539	0.07539	0.013166	0.99	REJECT
LEV -> PROFIT	0.256271	0.17213	0.238393	0.238393	1.074995	0.28	REJECT
IOS -> PROFIT	0.283065	0.29066	0.073268	0.073268	3.863444	0	ACCEPTED
LIQ -> PROFIT	0.286122	0.23284	0.120106	0.120106	2.382254	0.02	ACCEPTED

T TABLE 1.968442; ALPHA 0.05

4.1.1 Data interpretation

Data analysis results showed the path coefficient of leverage influence to IOS of 0.257779 with significance level of 0.00 with T calculation of

5.1687 can be concluded there is positive and significant influence. So hypothesis 1 can be accepted.

Data analysis results showed the path coefficient of the liquidity influence to IOS of 0.000993 with significance level of 0.99 with T calculation of 0.013166 can be concluded no influence. So hypothesis 2 is rejected.

Data analysis results showed the path coefficient of the leverage influence to profitability of 0.256271 with significance level of 0.28 with T calculation of 1.074995 can be concluded no influence. So hypothesis 3 is rejected.

Data analysis results showed the path coefficient of the IOS influence to profitability of 0.283065 with significance level of 0.00 with T calculation of 3.863444 can be concluded there is positive and significant influence. So hypothesis 4 is accepted.

Data analysis results showed the path coefficient of the liquidity influence to profitability of 0.286122 with significance level of 0.02 with T calculation of 2.382254 can be concluded there is positive and significant influence. So hypothesis 5 is accepted.

4.1.2 Discussion

1. Leverage influence positively to IOS.

With loan from external company able to maximize all investment opportunities (IOS) available, develop and maintain the investment opportunities (IOS). Leverage which is managed will improve the investment opportunities (IOS) to various things, such as new factory investment, IPO investment in stock exchange, investment to new branch in out of city, expansion investment to abroad, etc.

Leverage ratio depicts the operation fund source used by company. Leverage ratio also showed the risk facing company. Tarjo (2008)[31] found that the higher risk the higher uncertainty in the future to produce profit. By using loan to finance the company activity will trigger the company to increase their performance so able to produce more profit. With loan, company has liabilities to pay installment and the interest of the debt. Bangun (1989:84)[4] found that the higher loan to finance the company, the higher leverage and the higher risk faced by the company. The higher debt to equity ratio means the company has used huge loan to finance its asset, otherwise if the ratio is low means most asset financed by equity.

Astriani (2014)[3] has shown that the importance of investment decision to reach goals either short term, that is to produce maximum profit or long term to maximize the shareholder wealth that will be produced from the company investment activities. Gaver & Gaver (1993) stated that investment choice in case project which are supported by research and development activities, beside that company ability in taking opportunities compared with other companies.

2. Liquidity does not influence IOS.

Liquidity which is run well by company does not influence to IOS, because the investment come from the company capability in managing finance, good managerial capability and maximum market analysis. It can embody the useful investment opportunities set (IOS) which is good for short and long term for the company.

Idawati (2012)[17] found that liquidity is company capability to fulfill its short term liabilities on time. Bangun (1989:84)[4] found that the higher loan to finance company the higher leverage and the higher risk facing company. The higher debt to equity ratio means the company has use huge fund for its asset, and low means the most asset financed by equity.

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Research by Putu Sri Ariandani & I Ketut Yadnyana (2016)[1], from 30 manufacturing companies listed in Indonesia Stock Exchange in 2012-2014, it is found that liquidity did not influence IOS.

3. Leverage does not influence profitability

Loan level owned by company does not influence to profitability, because profitability can be achieved through maximum investment, such as investment in new product, new factory, new branch, IPO in stock exchange, investment in new market out of island, and various other investment opportunities. The investment able to bring profitability for company for short and long term.

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From their research, Edwin, Sawa Wabwile, et all (2014)[10], the results showed that leverage does not influence to profitability. Khushbakth, Tayaba (2013)[20] found in their research, no influence between leverage and profitability.

4. Investment Opportunity Set (IOS) influences positively to profitability

IOS which is maximized by company, such as new product investment, new branch/new factory, IPO investment in Stock Exchange, representative investment in abroad, and all investment opportunities of course have return and the return in the form of profitability. If company does not implement the investment, it is difficult to get additional profitability, so need new sustainable investment.

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5. SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

5.1 Summary

Leverage influence positively to IOS, with loan from external the company able to maximize all available investment opportunities (IOS, develop and maintain the investment opportunities (IOS). Leverage that is managed well will increase the investment opportunities (IOS) into various things, such as investment in new factory, investment in new product, investment in IPO in Stock Exchange, investment in new branch out of city, expansion investment abroad, and etc.

Liquidity does not influence to IOS, so liquidity which is managed well by company does not influence to IOS, because the investment finance come from the company capability in managing finance well, good managerial capability, and maximum market analysis. This thing which embody the investment opportunities which is useful for short term and long term.

Leverage does not influence to the probability, the debt level, do not influence to the profitability because profitability can be achieved through maximum investment such as investment in new factory, investment in new product, investment in

IPO in Stock Exchange, investment in new branch out of city, expansion investment abroad, and etc. IOS influence positively to profitability, so the maximized IOS, such as investment in new factory, investment in new product, investment in IPO in Stock Exchange, investment in new branch out of city, expansion investment abroad, and all investment taken by company have return, and the received return in the form of profitability. If company does not take the investment opportunities, then difficult to get additional profitability, so need sustainable investment opportunities (IOS).

Liquidity influence positively to profitability, so short term liabilities is liabilities which should be paid by company on time as determined. The loan from external, if paid on time, then the external party will trust and facilitate the company to get loan for the second time and the next time. With the smoothness in paying the liabilities, then the loan from external will run smoothly, all company activities and the investment will run smoothly, the profitability will increase sharply.

5.2 Conclusion

Special findings in the research, IOS influences in the research, IOS is investment opportunities which run suitable with the owned asset and the fund owned by company. Leverage and liquidity and profitability can be controlled with the IOS. Leverage (debt level), liquidity (liabilities to pay short term debt on time), profitability (profit level) able to increase and run normally, if suitable with IOS strategy. Company should loan fund from external such as banking, and company should has good track record in paying short term liabilities on time (liquidity) and manage debt well. Then trust will increase, so IOS can run maximally because supported by external fund and always get priority in loan because pay the liabilities on time, then supported with strong fund investment can run smoothly and increase that cause the increasing profitability. The IOS if maximized and planned well then leverage and liquidity will suitable with IOS and from IOS able to increase profitability, the profit that will secure the company finance and able to pay liabilities on time (liquidity) and get loan certainty from external parties (leverage).

5.3 Recommendations

Profitability is the company sustainable milestone. The short and long term company goals are to reach profitability as planned. With the obtained profitability then the company competitiveness for short and long term will improve and develop well. Leverage has risk borne by the company. Debt ratio should not exceed the company capability to pay. Loan has the determined maturity date. If the company able to pay on time, then the leverage

will be more stable, minimum risk, and investment of the company can run smoothly.

Investment Opportunity Set (IOS) is estimated and ensured suitable with the company capability. Not only in the good condition today but also in the future. Because if the investment implemented, all risk will be borne by the company and to overcome the risks is not easy thing.

Liquidity should become company consideration when take short term loan. Liquidity able to bind the capability to pay debt if suitable with need and not over debt. Company should avoid over debt so the internal and external situation become stable in certain time.

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