**IMPACT OF FIRM LEVERAGE ON STOCK RETURN IN MANUFACTURING INDUSTRY**

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# ***Abstract***

# *This paper seeks to provide evidence on the impact of firm’s leverage on its stock return. The analysis was implemented on the 30 manufacturing companies listed on Bursa Malaysia. The selected companies were estimated from the annual financial reports covering a period of five years (2011-2015). The random effects GLS regression was employed in carrying out this analysis.*

# *The result of the study reveals that only one variable which is short term debt has enough evidence and significant negatively related to stock return. However, other variables such as long-term debt, total debt to equity and firm size are found to be irrelevant with stock return.*

***Keywords:*** firm leverage, stock return, manufacturing, firm size, short term debt, long term debt, debt to equity

# ***Introduction***

In general, firm leverage is applying of different financial instruments or borrowed capital from specific financial institution whether in a short term or long term period in order to increase the returns of investments. A firm can create various leverages via bond issuance, option contract, future contract, forward contract, and other financial instruments. Leverage usually supports firms to operate its organizations and help to invest as well. A company is considered to be highly leveraged or sometimes called as “high gearing” if there is significantly more debt than equity in financing. According to Ahmeti and Prenaj (2015), Modigliani-Miller (1985) proposition I without taxes stated that capital structure of a firm is independent with its firms’ value. That is to say, combination portion of debt and equity does not matter in the value of firms. However, Modigliani-Miller (1985) proposition I with taxes argued that the value of firm is maximized as the firm financing with 100% debt.

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There are various capital structures of companies such as capitalized with 50% debt and 50% equity, debt-free companies, and highly leveraged companies. Debt-free companies usually recognized as the company which financing in no debt and able to generate lots of surplus cash. On the other hand, companies whom financing in debt are unable to generates lots of surplus cash but possess the benefit of tax shields. Many studies have been conducted in financial literatures which analyze the impact of firm leverage on stock returns. Based on Antwi, Mills, and Zhao (2012), leverage such as long-term debts have positive relation to firm’s value. However, other studies found a negative and significant relation between leverage and stock returns in the overall manufacturing sector (Acheampong, Agalega, & Shibu, 2014). The findings are consistent with Tahmoorespour, Ali-Abbar, and Randjbaran (2015) who concluded long-term debt to capitalization and long-term debt to common equity impact negatively on returns of companies in the Consumer Goods industries in China.

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# ***Background of study***

Based on Bank Negara Malaysia (BNM), external borrowings of Malaysian firms grew at a modest annual rate of 4.2% between 2008 and 2014, averaging at 18% of Gross Domestic Product (GDP) (BNM report finds corporate leverage, 2015). However, the level of corporate leverage for Malaysian firms still remained below the level prior to global financial crisis, but in contract to some other emerging economies. A robust and relatively stable corporate return over the past few years have allowed Malaysian firms to gradually increase debt levels to investment and fund growing capital expenditure. More than 83% of domestic corporate debt was considered non-risky with the debt-to-equity ratio of firms less than one. In term of debt serving capacity, 80.5% of debts owed by Malaysian firms have enough earnings to cover more than two times interest expenses.

 In addition, percentages of domestic credit to private sector to Gross Domestic Product (GDP) also show a slightly increasing in linear from 2008 to 2015. Percentages of domestic credit to private sector enable the knowledge about corporate debt of firms in Malaysia indirectly. The data of World Bank recorded the domestic credit to private sector in Malaysia increasing sustainably from 108.4% in 2011 to 152% in 2015 (World Bank, 2016). The study was mainly focuses on 30 manufacturing listed companies on stock exchange of Malaysia in Bursa Malaysia. Bursa Malaysia was founded in 1973 and formerly known as Kuala Lumpur Stock Exchange (KLSE). It was renamed to Bursa Malaysia Berhad on 14 April 2004. Today, Bursa Malaysia is one of the largest bourses in ASEAN and hosting more than 900 companies across 60 economics activities. Bursa Malaysia functions as an exchange that providing services and goods such as listing, trading, clearing, settlement and depository.

***Problem statement***

Debt is not a problem until someone is incapable to pay it. In Malaysia, each company has its own corporate debt policy to ensure promotes efficiency, effectiveness, and consistency in managing the debts. Each several of corporate debt policy might require a different capital structure. However, there have some other elements influence the decision of capital structure such as market condition, sales stability, market prices, management behavior and attitude, financial flexibility, and corporate internal condition. All these variable elements might directly or indirectly influence the earnings of firms and the stock returns as well. Besides, most of the investors believe that debt-free companies is performing better than capitalized debt companies as they expect that the company have surplus cash with no debt. Meantime, they also believe the debt-free company has financial elasticity to take on debt if economic recession. On the other hand, although companies whom use debt is riskier than debt-free companies as debts may lead to some other default risk but they enjoy the benefits of tax shield.

 There are numbers of studies have been conducted to investigate the relationship between the firm leverage and stock returns. For instance, Penman, Richardson, and Tuna (2007) stated that the leverage component of Book to Price ratio has negative relation to future stock returns. In addition, Nguyen and Schubler (2013) also concluded that the returns impact negatively with leverage component of “total debt to (total capital + long-term debt)” for Germany and the UK. It indicates that stock returns decrease in leverage. These empirical results are also consistent with the Abdullah, Parvez, Karim, and Tooheen (2015) who found a negative relationship between leverage and stock return in the manufacturing sector listed on the Dhaka Stock Exchange in Bangladesh.

 The impact of firm leverage on firms’ value has been issued since the Modigliani-Miller (1985) introduced the capital structure irrelevance proposition. The proposition without taxes stated that it does not matter how the company proportion its capital structure to finance the operation and hypothesized in a perfect market. However, they argued in Modigliani-Miller (1985) proposition with taxes with the assumption of taxable and potential benefit from debt. Many researches remained interested to find out the relationship between the firm leverage and stock returns due to the rationale of still under consideration from previous studies and rare of research found about the impact of firm leverage on stock returns in Malaysia.

***Research question.***

The research intents to examine how firm leverage related to stock returns of the Malaysian Listed Companies. Furthermore, this study examines if any other elements have additional explanatory power on the stock returns of the Malaysian Listed Companies. The research questions for this study as follows:

1. What is the relationship between using short-term debts and stock returns of Malaysian Listed Companies?
2. What is the relationship between using long-term debts and the stock returns of Malaysian Listed Companies?
3. Does total debt to equity influences the stock returns of Malaysian Listed Companies?
4. Is the firm size related to stock returns of Malaysian Listed Companies?

***Significance of the study***

The study is to contribute a better understanding of the association of firm leverage and its stock returns for the future researchers who have desire to do this type of topic especially in Malaysia. This is due to the little financial literature of impact of leverage on stock returns in Malaysia. The causal relationship will indicate whether stock returns of Malaysian Listed Companies are affected by its firm leverage. This qualitative research can be contributed in four theories. Its promotes to the pecking-order theory. Pecking-order theory indicates an adverse selection model or known as in a “different way”. According to Shahar et al. (2015), firms are said that comply with pecking order if they first select to use internal instead of external financing and debt to equity financing if and only if external financing is used. In other words, a firm abide the pecking order will believe that reserve or retain earnings is superior to debt and debt is superior to equity. Pecking-order theory assumes that the asymmetric information increases the cost of financing. This may direct result in high debt used over equity in corporate capital structure. Therefore, this research is carried out to investigate absolutely the impact of leverage on firm’s value.

In addition, this study also promotes to trade-off theory. Trade-off theory focused on the consideration of firm on the several cost and advantages of alternative leverage plans. Most of firms are trying to balance the marginal costs and marginal benefits in its operations. Miglo (2012) assumed that debt created the benefits of shields earnings from taxes. Thus, most of firms may require higher level of leverage in order to maximize tax benefits and enhance the returns ultimately.

Agency theory was applied too in the study. Agency theory derived from the conflicts between management and shareholders, debt holders and equity holders. In general, the interest of one party is varying from others. Management team often has objective other than shareholders value maximization such as pursing certain target and goals. Meanwhile, there have conflicts between debt holders and equity holders also if the firms have higher debt level over the equity. This is due to the high debt or leverage may enhance the authority of debt holders in organization. Besides the agency theory, this study also contributes to the Modigliani-Miller Theorem (1985). According to Ahmeti and Prenaj (2015), Modigliani-Miller Theorem (1958) began the theory of modern business finance. Modigliani-Miller (1958) capital structure irrelevance proposition postulates that there are no taxes and no bankruptcy costs in the worlds. Therefore, the weighted average costs of capital (WACC) will no effect with any vary of firm’s capital structure. Modigliani-Miller (1958) proposition I deal with the firm’s value and stated that the firm’s value and its capital structure are totally independent. Modigliani-Miller (1958) proposition II deals with the WACC and stated that the return on equity increases in a linear fashion when the debt-to-equity ratio increases. Debt increases the riskiness of stock; thus the shareholders demand a higher return.

# ***Literature Review***

***Pecking-order theory***

According to Miglo (2012), pecking order theory set forth by Myers and Majluf (1984). High profitability firms are considered to prefer internal funds as much as equity due to the imperfect information problems in market usually will lead to unfavorable shares prices issued by the company. Meantime, miss valuation of debt is also lesser than equity. Hence, a “pecking order” emerges with the preference order: internal equity such as reserves and retain earnings being the first preference where the firms can avoid market attention, external debt as the second preference due to the lower information costs respect to debt, and the external equity being the last resort.

Pecking order theory takes consideration on information asymmetry and signaling effect (Schoubben & Hulle as cited in Shahar et al., 2015). Pecking order theory developed due to the information asymmetries among managers (insiders) and investors (outsiders). When managers (who are assumed know more inside information than investors) issue the new shares, investors always placed lower value to the new shares because they believed managers are acquiring benefits of over-valuation of this new shares. However, asymmetric information is more favorable to issue of debt as debt issued often signals the boards’ confidence on the investments is profitable and the current shares price is under-valuation.

Shyam-Sunder and Myers (1999) supported the pecking order hypothesis for different sectors over the period 1971-1989 using data from the New York Stock Exchange. Chen and Chen (2011) who examines 305 Taiwan electronic companies that are listed on Taiwan Stock Exchange of 2009 about the determinants of debt decisions also support to pecking order theory. This finding is concurring with Qureshi, Sheikh, and Khan (2015) who concluded that 72% of their results support pecking order theory in Pakistan.

***Trade-off theory***

Trade-off theory is known as one of the prominent capital structure theories. Based on Shahar et al. (2015), trade-off theory is the oldest capital structure theory and is associated to Modigliani-Miller Theorem (1958) that emphasize on optimal capital structure. Pecking order theory is said not to consider a target capital structure. In contrast, the trade-off theory is shaped by a well-defined target capital structure. Trade-off theory suggested an optimal structure of capital which reflects a trade-off between benefit to financing with debt and costs of financing with debt.

The benefit of financing with debt in trade-off approach is incurred as company paid the interest of debt and reduces the taxable income of company (Miglo, 2012). On the other hand, the costs of financing with debt consist of the financial distress costs such as bankruptcy costs of debt and agency costs. In simple words, trade-off theory emphasize that the benefits of tax shield are offset the firm’s financial distress costs and agency cost (Shahar et al., 2015).

The core concept of trade-off theory is to rationalize the moderate debt ratio. High level of debt ratio is often followed by high risk of bankruptcy. Thus, trade-off theory says that the firm will only continue lending up to a point where the marginal benefit of tax shields on addition debt is just offset the financial distress costs. This is in accordance with Shahar et al. (2015) who stated the marginal benefit of addition increase in debt drops as debt increase in the certain level and at the same time the marginal cost also increases. As a result, it may lead to bankruptcy of firm.

***Agency theory***

During 1960s and 1970s, basic agency paradigm was exploited in the economics and finances literatures for the purpose of determine the optimal risk sharing amount among several people. However, the realm of the agency theory gradually stretches to the management field in order to determine the collaboration between different individuals with different objective in company and achievement of the objective congruency (Birjandi, Hakemi, & Sadeghi, 2015). Furthermore, Namazi (2013) stated agency theory was also emerged broadly in the managerial accounting domains to identify the optimal interest contracting among several people and developing appropriate accounting control mechanisms to control their behaviour or action.

In primitive form, corporate government relates to the means by which provider of capital of company can guarantee themselves of the return on their investment. Therefore, the main objective of government of company is limited to the maximization shareholders’ wealth. However, according to Charreaux (as cited in Daly, 2015), the government of company also covers a unit which cause to delimit the capacities and influence the decisions of shareholders. Hence, The agency theory arises from the relationship between managers (agents) and shareholders (principals). In other words, agency theory is associated to the situations where a person (called as agent) is employed by another person (called as principal) to act or behave on his or her behalf based on a stipulated fee schedule.



*Figure 1*: Agency Theory Diagram

(Source: Muhib Islam, 2014)

***Modigliani-Miller Theorem***

Collaboration of Nobel Prize winners, Franco Modigliani and Merton Miller in 1958 and other universities professors, resulted in the Modigliani-Miller theorem (1958) known as the first and the most vital theory in capital structure field in today worlds (Ahmeti & Prenaj, 2015). By observing the work of Modigliani and Miller (1958) (as cited in Chen & Chen, 2011), this theory is trying to illustrate the indifferent of financial decisions in a perfect capital market condition.

According to Modigliani-Miller theorem (1958), the firm value and its capital structure are totally independent under certain key assumption. Modigliani-Miller theorem (1958) assumed that there is fully efficient in capital market with the symmetric information between insiders and outsiders and abundant information is disposal to all parties. It also assumed that there are no taxes, no bankruptcy costs, and no transaction costs. Therefore, Modigliani-Miller theorem (1958) set off that the choice of equity and debt become indifferent and internal and external funds can be replaced perfectly.

According to Antwi, Mills, and Zhao (2012), Modigliani and Miller (1963) made two propositions with assumed of a perfect condition of capital market. The first proposition is that the firm’s value and its capital structure are absolutely independent. In proposition I, Modigliani and Miller (1963) assumed the unlevered firms should equivalent to levered firms in terms of value of firms. The second proposition states that the cost of equity of leveraged firms should equal to the cost of equity of unleveraged firms with the added of financial risk premium. Modigliani and Miller (1958) proposition II with no taxes stated that no matter how debt ratio of firm change, there will be no change to cost of capital for each firm.

# ***Methodology***

 This study adopted a causal research design. Causal research design explores a cause-and-effect relationship between two or more variables. The key variables of this study are stock return, short term debt, long term debt, total debt to equity and firm size. The stock return is the dependent variable while short term debt, long term debt, total debt to equity and firm size are independent variables in the study. Therefore, a company’s stock returns are expected to be caused by its debt and firm size in this study. It is a cause-and-effect relationship.



*Figure 2 :* Research Framework of the Study

***Pooled Ordinary Least Square (OLS)***

Pooled Ordinary Least Square (OLS) model is one of the methods used typically in panel data regression where the cross-sectional and time series data are pooled into panel data set and estimate a ‘grand’ regression. This model ascertains the causal effect of one variable upon another through the investigating of change in one variable upon another variable. Moreover, Pooled OLS model also shows the slope coefficient where it acts as an indicator when there is a change among the dependent and explanatory or independent variables. The Pooled OLS model for this study is as follows:

$$SR\_{it}=β\_{1}+β\_{2}STD\_{it}+β\_{3}LTD\_{it}+β\_{4}DE\_{it}+β\_{5}SIZE\_{it}+ε\_{it}$$

Where:

SR = Stock return

STD = Short Term Debt

LTD = Long Term Debt

DE = Total Debt to Equity

SIZE = Firm Size

*β* = Slope Coefficient

$ε$ = Error Term

i = Cross sectional

t = Time series

***Random Effect Model (REM)***

Random effect model (REM) is also known as Error Components Model (ECM). Random effect model enables the knowledge about a true model through expressing the ignorance dummy variables into disturbance term. Ignorance of dummy variables in a model usually can cause a reduction in degree of freedom. As a result, reduction in degrees of freedom leads to an inefficiency parameter. Therefore, the random effect model is used to overcome this problem. In the random effect model, $β\_{1}$ is used as constant variable instead of$ β\_{1i}$ ($β\_{1}+ε\_{i }$) where the $ε\_{i }$indicates a random error term with zero mean and a variance of $σ\_{ε\_{ }}^{2}$ . Therefore, the random effect model for this study is as follows:

$$SR\_{it}=β\_{1}+β\_{2}STD\_{it}+β\_{3}LTD\_{it}+β\_{4}DE\_{it}+β\_{5}SIZE\_{it}+w\_{it}$$

Where:

$w\_{it}$ = $ε\_{i }$+ $µ\_{it}$

$ε\_{i }$ = error component of individual specific

$µ\_{it}$ = error term of time series and cross section

## ***Fixed Effect Model***

In contrast to random effect model (REM), fixed effect model treats all observed quantities as non-random values. The fixed effect model determines the company distinct in intercept but same slopes and constant variance between companies. Subscript of i is added in the fixed effect model equation to represent the distinct of intercept among the companies. In panel data analysis, the Fixed Effect Within-Group (WG) Estimator is used typically represents an estimator for the coefficients in the regression model. Restricted F-test is a formal test of the fixed effect model. The fixed effect model in this study is as follows:

$$SR\_{it}=β\_{1i}+β\_{2}STD\_{it}+β\_{3}LTD\_{it}+β\_{4}DE\_{it}+β\_{5}SIZE\_{it}+µ\_{it}$$

Where,

$β\_{1i}$ = β + $ε\_{i }$ (unknown intercept for each entity)

$µ\_{it}$ = error term of time series and cross section

***Analysis of Model Effect Tests and Diagnostic Tests Result***

***Breusch Pagan Lagrange Multiplier (LM) Test***

Breusch Pagan LM test distinguishes the Pooled OLS model and random effects model. The main purpose of Breusch Pagan LM test is to determine and decide the most suitable model among Pooled OLS model and random effect model in the study. According to table 1, it shows that the computed probability of chi-square is equal to 0.0000. Since the computed p-value at 5 per cent significance level is smaller than 0.05, therefore the null hypothesis would be rejected and deduced that the random effects model is more favor.

***Hausman Test***

Hausman test is one standard test that generally used in applied panel data analysis to seek whether fixed effects model or random effects model is most suitable in the study. In Hausman test, refusal to concede the null hypothesis is favoring the fixed effects model. Based on the table 1, the Hausman test result obtained a value of 0.1815 for probability of chi-square. Since the computed p-value at 5 per cent significance level is larger than 0.05, therefore the null hypothesis should not be rejected and deduced that the most suitable model in this study is random effects model.

*Table 1*: Model Effect Tests Result

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Model Effect Tests**  |   | **OTE** |   |   |   |
| **Breusch Pagan Lagrange**  | Chi2(01) = 91.77 |  |   |
| **Multiplier (LM)**  |  | P-value = 0.0000 |  |   |
|  |  | P-value < 0.05, reject Ho.  |  |   |
|  |  | Therefore, random effect model is more suitable than |
|   |  | pooled OLS model  |  |   |
| **Hausman**  |  | Chi2(4) = 6.25 |  |   |
|   |  | P-value = 0.1815 |  |   |
|   |  | P-value > 0.05, not reject Ho. |  |   |
|   |  | Therefore, random effect model is more suitable than  |
|   |  | fixed effect model |  |   |
| **Decision**  |  | Employ: Random Effect Model  |  |   |

***Multicollinearity Analysis***

Multicollinearity is essentially a problem of two or more explanatory variables are highly related for each other. The presence of multicollinearity would lead to a bias result in the regression model due to the absent of independent effect of explanatory variables towards dependent variables. One of the common methods used to detect the multicollinearity problem is Variance Inflation Factor (VIF). A value of 10 of VIF indicates that there is a multicollinearity problem emerge in the regression model as well as the fact that the larger the value of VIF, the more troublesome the problem of linear relationship between variables. Based on the table 2, the VIF shown a mean value of 3.19 in this study. Hence, it can be deduced that no multicollinearity problem presents in the proposed model of the study.

***White Heteroscedasticity Test***

In econometrics, white heteroscedasticity test or sometimes called as “white test” is used extremely prevalent to measure the heteroscedasticity problem in a regression model. It is a problem of heteroscedasticity exists in regression model when the variance of residuals is not constant for all different observations. From the table 2, white heteroscedasticity test result obtained a value of 0.0000 for the computed probability of chi-square. The computed p-value at 5 per cent of significance level is smaller than 0.05, this suggests that the null hypothesis would be rejected and concluded that there is a heteroscedasticity problem in regression model.

In order for the proposed model to be more reliable it is necessary to make the adjustment and correction in the model. There is one main remedial for heteroscedasticity problem in random effects model which is Robust Standard Error Random Effects GLS regression. This method corrected the standard error by taking into consideration of heteroscedasticity problem without changing the value of estimated coefficients. The values that only changed are the standard error of each coefficient and the t-statistics for hypothesis testing.

***Breusch-Godfrey Serial Correlation LM Test***

The problem of Serial Correlation or sometimes known as ‘Autocorrelation’ is detected using Breusch-Godfrey Serial Correlation LM test in this study. Serial correlation LM test aims to measure the correlation between the current value of a variable and its own past values. Based on the table 2, it shows that the computed probability of chi-square is equal to 0.4823 for serial correlation test. The computed p-value at significance level of 5% is greater than 0.05, this suggests that the null hypothesis would not be rejected and concluded that autocorrelation problem is not exists in the regression model.

*Table 2*: Diagnostic Tests Result

|  |  |  |
| --- | --- | --- |
| **Diagnostic Tests**  |   | **OTE** |
| **Multicollinearity** |  | Mean VIF = 3.19 |
|   |  | Since the VIF is less than 10, Ho is not rejected |
|   |  | Hence, no multicollinearity problem  |
| **Heteroscedasticity**  |  | Chi2(14) = 88.50 |
|   |  | P-value = 0.0000 |
|   |  | P-value < 0.05, Ho is rejected |
|   |  | Thus, heteroscedasticity problem exist |
| **Serial Correlation** |  | F (1, 29) = 0.507 |
|   |  | P-value = 0.4823 |
|   |  | P-value > 0.05, Ho is not rejected |
|   |  | Thus, no autocorrelation exist |
| **Remedies**  |  | Problem: Heteroscedasticity  |
|   |  | Employ: Robust random effects GLS regression |

***Findings***

Table 3 exhibits the regression analysis on the impact of firm leverage on stock return of Malaysian Manufacturing Listed companies. The ultimate regression equation of this study is Y = − 0.1040 − 0.4923 $STD\_{t}$− 0.2197$LTD\_{t}$ + 0.0699 $DE\_{t}$+ 0.0347$LTA\_{t}$*.* This equation points out that the short-term debt is only indicator which is negatively significant to stock returns whereas the long term debt is negatively insignificant and the total debt to equity and firm size is positively insignificant to the stock return. The model that is preferred to be used in this study is Random Effects Model in reference to both the Breusch Pagan LM Test and Hausman Test.

 R-squared (R2) is commonly used to measure the percentage of dependent variable can be clarified by the independent or explanatory variables. In this study, the value of R2 is 0.2012 and indicates that 20.12% of the stock returns are explained by a cumulative effect of the four independent variables employed in this model. This suggests that the model is not well fit with data due to 79.88% of variation in the dependent variable remains has not been interpreted by the independent variables. The fact of ROA is merely a benchmark and cannot be employed indicates stock returns of company would be able to explain such result.

*Table 3*: Regression Analysis

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable |  | Pooled OLS regression | Fixed effect GLS regression | Random effect GLS regression | Robust random effects GLS regression |
| STD | coefficient | -0.4523 | -0.3697 | -0.4923 | -0.4923 |
|  | p-value | 0.000 | 0.006 | 0.000 | 0.001\*\*\* |
| LTD  | coefficient | -0.3030 | -0.1998 | -0.2197 | -0.2197 |
|  | p-value | 0.004 | 0.071 | 0.027 | 0.132 |
| DE | coefficient | 0.0851 | 0.0134 | 0.0699 | 0.0699 |
|  | p-value | 0.060 | 0.786 | 0.079 | 0.259 |
| LTA | coefficient | 0.0118 | 0.0910 | 0.0347 | 0.0347 |
|  | p-value | 0.333 | 0.008 | 0.072 | 0.319 |
| C | coefficient | 0.0338 | -0.4466 | -0.1040 | -0.1040 |
|  | p-value | 0.647 | 0.031 | 0.377 | 0.630 |
| R-squared | 0.2217 | 0.2936 | 0.2012 | 0.2012 |

Notes: \*\*\*indicates statistical significance at 1% level.

***Short-term debt and stock return***

The short-term debt has shown an inverse relationship with the dependent variable, which is stock return. The coefficient amount of the short-term debt is -0.4923. It indicates that 1% increase in the STD (short term debt weighing against total assets) would decrease the ROA (stock returns) of Malaysian Manufacturing Listed Companies by 49.23%. Confirming the inverse relation between the short-term debt and stock return since the statistically significant at 1% is contributed primarily form short term debt against total assets (STD).

***Long-term debt and stock return***

The long-term debt also has shown an inverse relationship with dependent variable, which is stock return. The coefficient amount of long-term debt is -0.2197. It indicates that 1% decrease in LTD (long term debt weighing against total assets) would increase the ROA (stock returns) of Malaysian Manufacturing Listed Companies by 21.97%. The relationship between the long-term debt and stock returns cannot be confirmed in this study since the statistically insignificant is contributed mainly from long-term debt weighing against total assets (LTD).

***Total debt to equity and stock return***

Total debt to equity (DE) has shown a positive relationship with dependent variable, which is stock return. The coefficient value of total debt to equity (DE) is 0.0699. It interprets that 1% increase in DE (total debt weighing against total equity) would increase the ROA (stock returns) of Malaysian Manufacturing Listed Companies by 6.99%. Acknowledging a positive relationship between total debt to equity and stock returns cannot be achieved in this study since there is a statistically insignificant relation contributed from long-term debt weighing against total assets.

***Firm size and stock return***

The firm size as assessed by logarithm of total assets (LTA) has shown a positive relation with dependent variables, which is stock return. The coefficient value of logarithm of total assets (LTA) is equal to 0.0347. It indicates that 1% decrease in LTA (firm size) would decrease the ROA (stock return) of Malaysian Manufacturing Listed Companies by 3.47%. Acknowledging a positive relationship between firm size and stock returns cannot be reached yet in this study as there is statistically insignificant relation contributed from logarithm of total assets.

***Short-term debt, long-term debt, total debt to equity, firm size and stock return***

The result form analysis has provided the revelation of short-term debt is negatively significant related with stock returns whereas long-term debt, total debt to equity and firm size are insignificantly related against stock returns. This result indicates that increase (decrease) in short term debt would exactly affect the stock returns in an inverse direction while increase (decrease) in long term debt, total debt to equity and firm size would not exactly affect the direction of stock returns.

***Conclusion***

To sum up, this study aims to determine the potential factor of firm leverages that affect the stock return of manufacturing listed firms in Malaysia. The dependent variable of this study is stock return whereas short-term debt, long-term debt, total debt to equity and firm size are selected as independent variables. The time frame of this study is from year 2011 to 2015.

 Several methods are applied in this study, including the Pearson correlation, Breusch and Pagan LM test, Hausman test and others diagnostic checks in order to prove the proposed hypothesis correctly. This study also made use of secondary data which includes the balance sheet, income statements and the financial notes of the 30 manufacturing listed firms.

 Based on the results, Random Effect model is the preferable model and it is discovered that one of the independent variables which is short-term debt is negatively significant at 1% level related to stock return, the dependent variable. This finding is consistent with Habib, Khan, and Wazir (2016) who revealed a negative significant relationship between short term debt and stock return. As for the long-term debt, although the result turns out to be insignificant, yet it still has a negative relationship towards stock return. This finding is concurring with Boadi and Yao (2015). Total debt to equity and firm size is positively related with stock return even though the results shown an insignificant relationship of total debt to equity and firm size against the stock return. This finding is consistent with Olaniyi, Elelu and Abdulsalam (2015) who found a positive and insignificant relationship of debt ratio to stock return. Shafana, Rimziya and Jariya (2013) and Niresh and Velnampy (2014) also found a positive insignificant relationship of firm size towards stock return.

 In brief, the results of this study found that stock return is affected by short-term debt only instead of long-term debt, total debt to equity and firm size. Short-term debt is negatively significant towards stock return for the manufacturing firms in Malaysia.

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