

INSTITUTIONAL OWNERSHIP AND BOND YIELD SPREADS IN MALAYSIA

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ABSTRACT: *The presence of institutional investors who held corporate bonds rather than individual investors might be a significant factor in the performance of spread of yield to maturity (YTM). It is argued that higher institutional ownership will provide enhanced active monitoring on the cost of debt and presumably more control on defaults risk performance as measured by yield spreads (the difference between a minimum and maximum YTM) for corporate bond issues in Malaysia. The main objective of this study is to investigate and find the relationship between institutional ownerships and bond' yield spreads. Data are obtained from firm issuers' annual reports, Bondinfo Hub of Malaysia Central Bank and Bloomberg for the period 2000 to 2014. Three statistical tests are applied for analyzing the impact of institutional ownership on default risk, namely; pooled ordinary least squared (OLS), fixed effect and random effect model. Results show that the presence of top-6 and other institutional ownerships is significant to reduce yield spreads within the firm or fixed effect and random effect. However, it is not significant when the pooled OLS is applied. It is proposed that the impact of the fixed effect approach applied in this study is important in future debt issuances since it provides the coefficient of estimation sign in the regression model. In addition, from the perspectives of the random effect, it may facilitate issuer in predicting the tranches of issuances which are nearing default and invariant correlated to the individual tranches effects.*

Keywords: Institutional ownerships, Bond, Yield Spreads, Default Risk, Listed Issuer

1. INTRODUCTION

An analysis of bond yield spreads as a measure of default risk is an important issue in investment since this is a key factor in determining the cost of external financing bear by the issuer of debt securities. The inability to meet interest obligations and the redemption of principal when they become due will not only tarnish the issuing firm's corporate image but more importantly this will project a crisis of confidence among investors on the financial performance of the firm. This situation leads to the discussion on the Agency Theory with respect to the separation of control and ownership and the issues arising from the agency cost of debt.

Typically, higher cost of debt is associated with higher yield spreads which intuitively denote higher default risk among issuer firms. The growing dominance of equity holdings by institutional investors, both domestic and international, has recently sparked a debate on their role as effective shareholders in the monitoring of firms' performance and enforcing good corporate governance [1]. Many studies suggest that institutional investors, as a governance mechanism are beneficial to bondholders [2-9]. In addition, a growing number of studies have indicated that increased institutional ownership helps reduce the cost of debt and that the benefit of monitoring increases with the duration of the investment. It is also argued that long-term (stable) institutional investors have stronger incentives to monitor management and thereby enhancing corporate finance and reducing the cost of debt. Other findings indicated that firms with larger long-term (short-term) institutional ownership are often associated with lower (higher) future bond yield spreads.

However, there is also argument suggesting the adverse impact of institutional monitoring. For instance, the private benefit hypothesis posits that a more concentrated ownership provides an institution with stronger incentives to appropriate certain benefits for itself. These stronger incentives may involve over-monitoring and exerting undue influence on management that can harm bondholders and other

shareholders. In addition, there is the suggestion that the cost of debt is higher when shareholder rights are strong. Several studies have established a relationship that institutional shareholding is associated with higher (lower) bond yields if external governance is strong (weak). Finally, there is the argument based on the agency conflict hypothesis which basically states that governance is detrimental (beneficial) to bond pricing, under circumstances where short-term (long-term) institutional ownership is larger [4-7].

This paper is organized as follows. Section 2 reviews the past studies on the association between institutional ownership and bond yield spreads. Section 3 discusses on the institutional ownership theory in view of corporate governance. Section 4 presents research methodology. In the following section, we report and discuss the results. Finally, section 6 concludes the paper.

2. LITERATURE REVIEW

The agency theory suggests that management has the incentive to engage in self-serving and value-reducing activities since it does not completely own the firm. These activities can range from entrenchment to shirking, perquisite consumption and empire building, to expropriation of firm assets. Several studies support the contention that ownership concentration through institutional holdings can help to reduce the negative effect of this agency risk [10-11]. In addition, some studies empirically show that institutional ownership is positively related to firm value and the inclusion of institutional ownership shifts the inflexion point of the relation between insider ownership and firm value to a higher number [12-14].

Many recent studies have also examined whether firms attracting more institutional investors on the equity side could help to lower cost of debt capital. Those studies that support this notion find that the higher the total institutional equity ownership, the better credit ratings and narrower credit spread that the firm will benefit. They attribute these findings to stronger incentives and better skills of an institutional

investor to monitor management, thereby enhancing corporate governance and reducing the cost of debt [14-17]. Several studies find that institutional ownership is negatively associated with yields on public bonds and positively associated with ratings on new bond issues, and this effect is stronger for borrowers with lower-rated bonds. Their explanation is that institutional investors can reduce both agency risk and information risk, where agency risk is the risk that management will not always act in the best interest of the firm because of the separation of ownership and management; and information risk refers to the risk that management will not disclose information that would adversely affect the default risk of debt [15-17]. A similar observation is seen in Korea where shareholders' activism due to institutional ownerships produces effective monitoring mechanism which lowers the cost of debt of firms.

In addition, in Chinese firms' financing activities, it is observed that corporations under government control exhibit lower cost of debt compared to corporations under private control. This shows that institutional ownership through government holdings are an important consideration in reducing firms' cost of debt. In Malaysia, the largest institutional investors consist of five government fiduciary bodies which exercise close oversight and control of management as well as involve in corporate decision-making in government-linked companies. This action helps to reduce agency costs and gives higher protection for bondholders' rights as well as the wealth of other beneficiaries. This active monitoring generally reduces bond yield spreads and results in an increase in bond yields even during the economic crisis of 2007-2008 and lower default risk [18-19].

A study on the performance of publicly listed companies on the Bursa Efek Indonesia (BEI) from 2006 to 2010 for 105 companies with 535 observations reports that institutional ownership have negative significant relationship towards opportunity cost resulting from the cost of monitoring and controlling [20]. This provides evidence that institutional investors play an active role in corporate governance by reducing the risk levels of their portfolio companies through effective monitoring management. Even though it is argued that institutional ownership has the tendency to increase the cost of loans due to the agency cost of debt at high levels of concentration, nonetheless, companies with institutional investors, in general, pay significantly lower borrowing costs than companies which have no institutional shareholders [21]. There is also evidence that the presence of large Public Pension Fund shareholders as institutional ownership reduces acquisitions activity after controlling for ownership endogeneity, firm-level governance structure and other firm characteristics and make them perform relatively better in the long-run [22-23].

On the other hand, the presence of institutional ownership strengthens shareholder control. Active monitoring aligns the interest of the management with those of shareholders at large or with those of concentrated ownership or blockholders in particular. Enhanced shareholder rights may encourage firms to pursue selfish strategies at the expense of the bondholders' interest. These may include the pursuance of high-risk projects that maximize institutional investors'

interest instead of firm value or forgo profitable investment opportunities due to the debt-overhang problem. Therefore, the agency view predicts that more concentrated institutional ownership increases the restrictiveness of bond covenants and consequently higher cost of debt.

3. INSTITUTIONAL OWNERSHIP THEORY

The influence of institutional investors who have purchased and hold the corporate bonds and sukuk rather than individual investors might be a significant factor in yields determination. Institutional ownerships supposes active and greater monitoring and pressure more sensitive towards the performance of defaults risk as measured by yield spreads of conventional bonds and sukuk. Many researchers focused on the impact of corporate governance mechanisms on bonds yields performances [14, 19, 24-26].

The presence of active institutional investors in monitoring and controlling the management decision-making focus on public listed firms invested by government fiduciary bodies¹⁵⁻¹⁶ able to reduce the cost of debt [14-15] which consequently reduce the default risk [14, 27]. For instance, Sanchez-Ballesta & Garcia-Meca [28] studied using a sample of Spanish listed firms indicating that ownership by the government in the listed firms have a relationship with the cost of debt whereby a higher level of ownership owned by them leads to having a lower firm cost of debt.

Moreover, Shailer & Wang [15] use interest rate to proxy for the cost of debt found that corporations under government control had a lower cost compared to corporations under private control in Chinese firms' financing activities. It shows that institutional ownership under government control is significant in lowering Chinese firms' cost of debt.

In addition, Abdul Wahab, How & Verhoeven [29] studied the largest institutional investors in Malaysia comprised of five government fiduciary bodies, i.e. National Equity Corporation, Retirement Fund Incorporated of Malaysia, Pilgrims Fund Board, Armed Forces Fund Board and Social Security Organisation found that the role of institutional investors an incentive to exercise closer oversight and control of management as well as in corporate decision-making are able to reduce agency costs and protect the wealth of the beneficiaries.

4. RESEARCH METHODOLOGY

Secondary data are used in this study. The data are gathered from various sources, for instance, the data on debt instruments are obtained from Bank Negara Malaysia (BNM), Rating Agency Malaysia (RAM) and Malaysian Securities Commissions (SC). Specifically, the data with respect to issue characteristics for conventional bonds and sukuk which include yield to maturity, number of tranches, issuer name, the price of debt, issue date, maturity date and issue size in Malaysia currency (MYR' million) are retrieved from the Bond info Hub's website of BNM.

Data on institutional ownership are obtained from the top thirty (30) largest shareholders as at of financial year end which is published in companies' annual report. From the shareholding listing, data are clustered into two types of institutional ownership; top-6 covers the Employees

Provident Fund of Malaysia (EPF), National Equity Corporation (PNB), Retirement Fund Incorporated (KWAP), Pilgrims Fund Board (Lembaga Tabung Haji), Armed Forces Fund Board (LTAT) and Social Security Organisation (SOCSO) and other institutional owners cover all other institutional investors and individual investors. The data on yearly Malaysian Treasury Bills are obtained from the Bloomberg of Bursa Malaysia. Other than that, data on issuer characteristics such as return on assets (profitability), leverage, total assets (firm size), Tobin's Q (firm value) and sustainable growth rate are also obtained from this source. Next, all the data are then sorted; screened and matched to ensure consistency. Samples with missing data are omitted. Thus, a total sample 140 issuer firms are obtained for the bond instruments with 256 tranches over the period 2000 to 2014.

For testing the relationship between the variables, the estimations models for pooled OLS, random effect and fixed effect are applied [30-32]. The pooled OLS model treats, ϵ as identically and independently distributed disturbances that are uncorrelated with x , or $Corr(\epsilon_i, x_i) = 0$. In this case, the data can be pooled and OLS can be used to estimate the model which denotes the estimator of the slope by β_{OLS} . The intercept and slope coefficients are constant across N and T representing by tranche issuances of each issuer. This postulates that both the intercept and the slope are the same across observations. However, these assumptions might be restrictive and lead to heterogeneity bias which requires the robustness checks analysis. Otherwise, the model does not require any additional adjustment technique for estimations. The model equation 1 for pooled OLS is expressed as follow:

$$YieldSpreads_{it} = \beta_{OLS} + \beta_1(TOP-6IO_{it}) + \beta_2(OthersIO_{it}) + \beta_3(Volatility_{it}) + \beta_8(\ln Size_{it}) + \beta_9(Tenure_{it}) + \beta_{10}(profit_{it}) + \beta_{11}(Leverage_{it}) + \beta_{12}(FirmValue_{it}) + \beta_{14}(FirmSize_{it}) + \beta_{15}(Sustain_{it}) + \beta_{16}(\ln GDP_{it}) + \epsilon_{it} \dots \dots \dots model eq.1$$

Next, is the fixed effect model, λ_i which is correlated with and within variation in the data only, but is the most flexible in that it allows for the endogeneity of regressors. The individual specific effects are assumed to be individual specific intercepts to be estimated or more crucially when $Corr(\lambda_i, X_{it}) \neq 0$. this model also treats as a constant value for each tranche of issuances. Here, when the covariance between the individual specific effect and any regressor is not zero, neither pooled OLS nor random effects estimators provide consistent estimators. The fixed effect estimator eliminates an unobserved effect from the model and applying the pooled OLS on the resulting fixed effect estimator, the following model equation 2 is obtained.

$$YieldSpreads_{it} = (\beta_{re} + \lambda_i) + \beta_1(TOP-6IO_{it}) + \beta_2(OthersIO_{it}) + \beta_3(Volatility_{it}) + \beta_8(\ln Size_{it}) + \beta_9(Tenure_{it}) + \beta_{10}(profit_{it}) + \beta_{11}(Leverage_{it}) + \beta_{12}(FirmValue_{it}) + \beta_{14}(FirmSize_{it}) + \beta_{15}(Sustain_{it}) + \beta_{16}(\ln GDP_{it}) + u_{it} \dots \dots \dots model eq.2$$

The random effect model assumes that the tranche of issuances has their own intercepts while restricting the slope to be homogenous. To accommodate such heterogeneity, the random effect model decomposes the ϵ into two composite error terms as $\epsilon_{it} = \lambda_i + u_{it}$. The λ_i which represents tranche issuances effect (unobserved heterogeneity) is time-invariant hence it is not necessary to use the year index. The model assumes the u_{it} is identically and independently distributed with mean zero and variance, and more crucially uncorrelated with the regressor as $Corr(\lambda_i, X_{it}) = 0$. Because of this, the autocorrelation OLS will be inefficient and the resultant OLS standard errors will be invalid. In this circumstance, the random effect estimator is required to estimate and transform OLS model resulting in estimator,

$$y_{it} - \theta \bar{y}_i = \alpha + \beta(x_{it} - \theta \bar{x}_i) \cdot$$

The model estimator uses a weighted average of the within and between variations in the data had the same intercept, σ_u^2 and, $\theta = 1 - \frac{\sigma_u^2}{T\sigma_\lambda^2 + \sigma_u^2}$ expressed in

model equation 3 as follows.

$$YieldSpreads_{it} = \beta_{re} + \beta_1(TOP-6IO_{it}) + \beta_2(OthersIO_{it}) + \beta_3(Volatility_{it}) + \beta_8(\ln Size_{it}) + \beta_9(Tenure_{it}) + \beta_{10}(profit_{it}) + \beta_{11}(Leverage_{it}) + \beta_{12}(FirmValue_{it}) + \beta_{14}(FirmSize_{it}) + \beta_{15}(Sustain_{it}) + \beta_{16}(\ln GDP_{it}) + \lambda_i + u_{it} \dots \dots \dots model eq.3$$

5. RESULTS AND DISCUSSION

As reported in Table 1, the validity of the regressions has been tested on models 1, 2 and 3 to ascertain the model with the best fit in explaining the relationship between institutional ownership with yield spreads. With respect to the F-statistics, the Pooled OLS as represented in model 1 indicates that the model is valid at the 95 per cent confidence level, suggesting that the relationship is significant. The model fit is more accurate for the fixed-effect model, which is represented by model 2 and is significant at the 99 per cent confidence level. In addition to that, the F-tests also indicate a significant result at 99 per cent confidence level.

Secondly, the result of Wald chi-squared from the random-effect model is analysed. The result is significant at the 99 per cent confidence level. This suggests the validity of the estimation model and therefore it can be used to investigate the proposed relationship as it is assumed that the intercept value is identically and independently distributed in the full sample. Thirdly, based on the observed R-square and adjusted R-square statistics. R-square is reported for all models estimation of regression and adjusted R-square is only reported for pooled OLS in order to investigate the percentage of relationship from explanatory variation in explaining yield spreads. From the results shown in Table 1, model 1 indicates that the R-squared is 10.25 per cent and adjusted R-squared is 4.64 percent respectively.

The results indicate that the performance of yield spreads is explained by the variation in explanatory variables by about 10 per cent. This shows that the presence of institutional ownership and directors in the issuer firms is important in reducing the default risk. Model 1 shows that both proxies for

institutional ownerships indicate insignificant results on yield spreads. Specifically, with respect to the presence of top-6 institutional ownership in the issuer firms, the result is negative and not statistically significant. However, the results show the opposite direction for others institutional ownerships but still, the performance of yields spreads in this model is not significant with respect to the presence of institutional ownership in the issuer firms.

Table1. Multivariate Regressions Results

Explanatory & Control variables	Model		
	OLS	FE	RE
Intercept	5.721 (-1.03)	-9.970 (-1.81)	-9.500* (-2.12)
Institutional Ownerships (IO):			
Top-6 IO	-0.013 (-1.37)	0.051*** (-3.83)	0.036*** (-3.56)
Others IO	0.0003 (-0.05)	0.036** (-3.43)	0.025*** (-3.60)
Issue Characteristics:			
Volatility	0.108 (-1.56)	0.120** (-2.70)	0.124** (-2.79)
lnSize	-0.116 (-1.62)	0.0001 (0.00)	-0.042 (-0.52)
Tenure	0.013 (-1.02)	0.026 (-1.95)	0.023 (-1.68)
Issuer Characteristics:			
Profitability	0.091*** (-3.51)	-0.085 (-0.86)	-0.039 (-0.63)
Leverage	0.026 (-0.96)	0.035 (-0.35)	0.009 (-0.11)
Firm Value	0.613 (-1.44)	0.419 (-1.45)	0.458 (-1.61)
Firm Size	0.023 (-0.37)	-0.067 (-1.84)	-0.059 (-1.80)
Sustainability	-0.024 (-1.62)	-0.007 (-0.59)	-0.008 (-0.66)
Systematic Risk:			
lnGDP	-0.329 (-0.79)	0.631 (-1.48)	0.707* (-2.01)
Firm fixed-effects	No	Yes	No
N	256	256	256
R-squared	0.1025	0.2383	0.2294
Adj R-squared	0.0464	-	-
Model Fit	1.83**	4.09***	-
F-test	-	12.32***	-
Wald chi-squared	-	-	50.29***

However, the findings from the pooled estimation model regression of model 1 could not provide empirical evidence of the impact of the presence of institutional ownership towards yield spreads. Even though it is argued that their concentrated shareholding should lead them to be more active in monitoring the firm's performance as they could exert influence on top management, this has not happened as shown by the results. This finding is consistent with a study on institutional ownership of Indonesian companies which also indicates no significant effects to bond yields [32].

Different results are revealed by model 2 and model 3 which indicate that the institutional ownership has a significant relationship with long-term yield spreads. Both, the top-6 institutional ownership and others institutional ownerships show positive significant relationships at the 99 per cent and 95 per cent confidence levels with the yield spread respectively in model 2. Similar findings are obtained for model 3 with the confidence level of significant indicates 99 per cent for both independent variables proxies. The positive coefficient of estimations postulates that higher other institutional ownership concentration leads to higher yield spreads. This result is influenced by the volatility and lnGDP which are control variables since both indicate positive significant results towards yield spreads. This suggests that issuer firms which have the higher presence of other institutional ownership may have higher default risk due to higher volatility in YTM and dynamic changes in the current price of GDP at the issue date of those instruments. Other control variables have shown insignificant results on yield spreads.

6. CONCLUSIONS

The presence of both institutional ownerships either by top-6 or other institutional ownerships such as mutual fund, insurance companies, other nominees' institutional firms have a positive relationship on bond yield spreads. The evidence, however, does not support the argument that the presence of institutional ownership reduces the default risk even though the presence of top-6 ownerships among institutional investor is higher. In fact, it can be concluded that the presence of institutional ownership leads to higher default risk. The methodology used in this study can be used as an alternate testing methodology to the existing approaches not only in cumulative effects of relationships between the presence of institutional ownership with default risk but also in fixed effect and random effect approaches. Fixed effect approach reveals an implication effect in the scope of within-firm effects. The analysis is important to the firms for further review on the variables that may give impact to yield spreads.

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