

Do Investors React to Perpetual Bond Announcements in Asean? Evidence from an Event Study

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ABSTRACT

This study investigates how investors in ASEAN respond to announcements of perpetual bond issuance and whether firm-level characteristics help explain variations in market reactions. The analysis covers 99 announcements between 2019 and 2024, excluding 2020 due to pandemic-related market volatility. Using an event study methodology, the research measures short-term stock price reactions through cumulative abnormal return (CAR) within a (-1,+1) event window. To further assess determinants of market response, a cross-sectional multiple linear regression is employed with explanatory variables including book-to-market ratio (BM), debt-to-equity ratio (DER), return on assets (ROA), and bond rating, while market return (MR) serves as a control. Robustness checks are conducted by adding country and sector dummy variables to capture contextual influences. The findings show that perpetual bond announcements are generally followed by positive abnormal returns, indicating that investors perceive them as informative financing signals. Regression results reveal that DER has a significant negative effect, while MR has a significant positive effect on CAR, whereas BM, ROA, and bond rating are not statistically significant. Sectoral analysis indicates stronger responses for financial firms, while country-level differences are less relevant. These results are consistent with signaling, agency, and information asymmetry theories, suggesting that investors weigh leverage and market sentiment more heavily than profitability or external ratings. The study contributes to the literature on hybrid financing in emerging markets and provides practical insights for managers in structuring financing decisions and for regulators in enhancing classification and reporting standards.

KEYWORDS

Perpetual Bonds, Market Reaction, Event Study, Firm Characteristic, ASEAN



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INTRODUCTION

Perpetual bonds are hybrid financial instruments that combine features of both debt and equity. They offer indefinite coupon payments without a specified maturity date and require no principal repayment (Aloui et al., 2016; Godlewski et al., 2013; Smaoui et al., 2019). The introduction of these instruments began in the seventeenth century, with one of the oldest documented issuances in 1624 by a Dutch water authority. In modern corporate finance, these instruments have become more common as they can be structured to meet equity classification under IFRS when subordinated and without contractual maturity (Kim et al., 2023). This allows firms to enhance their capital without increasing the reported liabilities. Perpetual bonds may be classified as Additional Tier 1 capital for financial institutions under the Basel framework, enhancing capital adequacy ratios without resulting in ownership dilution. The tax deductibility of interest payments further enhances their appeal (Gropp & Heider, 2010; Jensen & Meckling, 1976; Myers & Majluf, 1984).

Despite these benefits, perpetual bonds are intricate. They often include features such as call provisions, coupon deferrals, and step-up clauses. These features may increase uncertainty, particularly in emerging markets where investor familiarity and requirements for disclosure differ significantly (Wang & Xu, 2021; CFI, 2024). Consequently, market responses to perpetual bond announcements are varied. Some investors perceive these announcements as signals of financial confidence, whilst others regard them as a last-resort funding strategy, especially when the issuer's fundamentals appear weak. Previous studies support both perspectives. Wang and Xu (2021) documented negative stock price reactions in Chinese non-financial firms; in contrast, Liu and Liu (2021) noted favorable responses following the issuance of perpetual bonds by a large state-owned bank.

In recent years, the issuance of perpetual bonds has become increasingly common throughout ASEAN. Between 2019 and 2024, excluding 2020 due to pandemic-related market volatility (Kayani et al., 2024), a total of 99 announcements were recorded in Malaysia, Singapore, Thailand, Indonesia, and the Philippines. Issuance activity peaked in 2019, experienced a decline in the following years, and has shown signs of recovery in 2024. Although case-specific evidence, such as the 2021 issuance by UOB Ltd., demonstrates prompt positive stock market reactions, extensive empirical study on this topic within the ASEAN region remains limited (Li et al., 2017; Ammann et al., 2017; Goncharenko et al., 2021).

This study seeks to address the existing gap by exploring two key questions. First, do announcements of perpetual bond issuance in ASEAN lead to statistically significant abnormal stock returns? Second, can firm-specific characteristics help explain the variation in investor responses to these announcements? To answer these questions, the study uses an event study methodology based on the semi-strong form of the Efficient Market Hypothesis. Market reaction is measured using cumulative abnormal return (CAR) over a (-1, +1) event window, and the analysis is further supported by cross-sectional regression to assess the influence of selected firm-level variables.

This study examines five explanatory variables: book-to-market ratio (BM), debt-to-equity ratio (DER), return on assets (ROA), bond rating, and market return (MR). These variables are selected to capture a combination of internal financial fundamentals and external signals. BM and ROA represent the firm's financial condition and growth potential; DER reflects the level of leverage; bond rating serves as an indicator of credit quality assessed by external agencies; and MR captures overall market sentiment at the time of the announcement. The analysis aims to assess whether these indicators help explain how investors interpret the issuance of perpetual bonds (Bologna et al., 2023).

This research contributes to the literature on hybrid financing in emerging markets by combining theoretical perspectives with empirical analysis. Its primary contribution lies in a comparative assessment of perpetual bond announcements in ASEAN, employing both event study and cross-sectional regression (Dutordoir et al., 2016; Park et al., 2018). Beyond measuring average market reactions, it also investigates whether firm-specific characteristics influence investor interpretation (Liu & Liu, 2020; Wang & Xu, 2021; Wang & Xu, 2021). The findings may inform financial managers about how structural features and firm fundamentals shape investor responses. They may also help regulators understand how classification and disclosure standards impact market efficiency, particularly when hybrid instruments blur the line between debt and equity. The remainder of this article is organized as follows. The next

section outlines the research method, including data sources and analytical steps. This is followed by the presentation and discussion of the results. The final section concludes the paper and highlights key implications and suggestions for future research.

RESEARCH METHOD

This study adopts a two-step empirical approach to analyze investor reactions to perpetual bond announcements in ASEAN. It also explores whether differences in firm characteristics help explain the variation in market responses. First, an event study measures stock price changes around perpetual bond announcements using cumulative abnormal return (CAR). Second, a cross-sectional regression examines how firm characteristics—book-to-market ratio (BM), debt-to-equity ratio (DER), return on assets (ROA), and credit rating—along with market return (MR) as a control, influence these reactions. Robustness checks with country and sector dummies are added to test contextual variation.

Sample and Data Sources

This study analyzes 99 announcements of perpetual bond issuance by listed ASEAN firms between 2019 and 2024, excluding 2020 due to extreme COVID-19 market volatility (Kayani et al., 2024). The sample covers Malaysia (44), Singapore (32), Thailand (19), Indonesia (2), and the Philippines (2), reflecting the dominance of more developed capital markets. A purposive sampling method was applied with four criteria: (1) verifiable announcement dates, (2) availability of stock price and market index data, (3) access to audited financial reports, and (4) credit ratings from international or domestic agencies. Data on stock prices, market returns, and firm financials (equity, market capitalization, DER, ROA) were sourced from S&P Capital IQ Pro and cross-checked with company reports. Credit ratings were obtained from Bloomberg. The dataset is structured cross-sectionally, with one observation per announcement, enabling analysis of how firm fundamentals and market context shape investor responses.

Event Study Design

This study uses an event study method, grounded in the semi-strong Efficient Market Hypothesis (Fama, 1970), to test whether stock prices react to perpetual bond announcements. Following Campbell, Lo, and MacKinlay (1997), the procedure involves identifying events, defining the event window, estimating normal returns, calculating abnormal returns (AR), and testing significance. AR is computed as the difference between actual stock returns and expected returns, with the latter estimated using the market-adjusted model based on national market indices. For each firm, AR is calculated as the difference between the actual stock return and the expected return on a given trading day. The expected return is estimated using the market-adjusted model, which assumes that the firm's normal return mirrors the return of its respective national market index:

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (1)$$

Where:

$AR_{i,t}$ is the abnormal return of firm i on day t ;

$R_{i,t}$ is the actual return of firm i ; and

$E(R_{i,t})$ is the actual return of firm i , proxied by the return of the market index on day t .

To assess the overall market reaction, cumulative abnormal return (CAR) is calculated by summing the AR over a specified time window:

$$CAR_{i(t_1,t_2)} = \sum_{t=t_1}^{t_2} AR_{i,t} \quad (2)$$

The cumulative average abnormal return (CAAR) is then obtained by averaging CAR across all firms:

$$CAAR_{(t_1,t_2)} = \frac{1}{N} \sum_{i=1}^N CAR_{i(t_1,t_2)} \quad (3)$$

Brown and Warner (1985) show that event studies with daily data are reliable if event windows and return models are properly chosen, with mean-adjusted and market-adjusted models yielding similar results. This study tests seven windows [(-10,+10), (-5,+5), (-3,+3), (-1,+1), (0,+3), (0,+5), (0,+10)] and finds (-1,+1) most significant, thus used as the primary window. In line with MacKinlay (1997), CAR values in this window are winsorized at the 95th percentile to reduce outlier effects, and the adjusted CAR is applied in the regression to assess firm characteristics' influence on investor responses.

Regression Model and Variables

To evaluate whether firm-specific characteristics affect investor reactions to perpetual bond announcements, this study applies a cross-sectional multiple linear regression model. The dependent variable is the cumulative abnormal return (CAR) over the (-1, +1) event window. To minimize the effect of extreme values, CAR is winsorized on the upper tail at the 95th percentile, while retaining all observations.

The regression model is specified as follows:

$$CAR_i = \beta_0 + \beta_1 BM_i + \beta_2 DER_i + \beta_3 ROA_i + \beta_4 Rating_i + \beta_5 MR_i + \varepsilon_i \quad (4)$$

Where:

- CAR_i = cumulative abnormal return for firm i , winsorized at the 95th percentile over the (-1, +1) window;
- BM_i = book to market ratio, used as a proxy for limited growth prospects and financial risk;
- DER_i = debt to equity ratio, reflecting financial leverage;
- ROA_i = return on assets, measuring profitability;
- $Rating_i$ = dummy variable coded as 1 if the perpetual bond is rated investment grade, 0 otherwise;
- MR_i = market return prior to the announcement, calculated as the cumulative geometric return of the national stock index from day -110 to -20;
- β_0 = intercept;
- β_1 - β_5 = regression coefficients; and
- ε_i = error term.

The variables are based on signaling, agency, and pecking order theories, as well as prior studies. Book-to-market ratio (BM) proxies risk and growth potential, debt-to-equity ratio (DER) captures leverage, and return on assets (ROA) measures profitability. Credit rating (dummy: 1 = investment grade) signals credit quality, while market return (MR) controls for broader sentiment. This model tests whether firm fundamentals and market context affect CAR, with sector and country dummies added for robustness.

Robustness Check: Country and Sector Controls

To strengthen the main regression, country and sector dummies are added. Country dummies (Thailand, Singapore, Indonesia, Philippines; baseline = Malaysia) capture institutional differences, while a sector dummy distinguishes financial from non-financial firms. These controls test whether firm-level effects on CAR remain consistent across regulatory contexts and industries. The results assess how institutional and sectoral factors influence investor responses to perpetual bond announcements.

RESULTS AND DISCUSSION

Descriptive Analysis

Table 1 presents the descriptive statistics for all variables used in the regression analysis. These include the winsorized cumulative abnormal return (CAR) over the (-1, +1) event window, four explanatory variables at the firm level, and one control variable. The dataset comprises 99 announcement events from listed firms in Malaysia, Singapore, Thailand, Indonesia, and the Philippines between 2019 and 2024. The year 2020 is excluded due to abnormal market volatility during the COVID-19 period.

Table 1. Descriptive Analysis

Variable	Mean	Std. Dev	Min	Max
CAR	0.0047395	0.0244138	-0.0528823	0.0707322
BM	1.3026800	0.8985752	0.1114215	4.7770760
DER	1.1029730	0.7500580	0.1107040	3.6590000
ROA	0.0160919	0.0181379	-0.0422000	0.0824000
Rating	0.5555556	0.4994328	0	1
MR	0.0183328	0.0606485	-0.0966868	0.1733770

CAR refers to cumulative abnormal return over the (-1, +1) window, winsorized on the upper tail at the 95th percentile. BM = book to market ratio; DER = debt to equity ratio; ROA = return on assets; Rating = dummy variable equal to 1 if investment grade, 0 otherwise; MR = market return during days -110 to -20 prior to announcement. All variables are based on 99 announcements by listed firms in five ASEAN countries during 2019–2024 (excluding 2020).

The average CAR is 0.0047, or 0.47 percent, with a standard deviation of 2.44 percent. This value is derived using the market-adjusted model and has been winsorized at the 95th percentile to minimize the influence of extreme positive observations. The relatively high standard deviation suggests that market responses vary substantially across firms.

The book to market ratio (BM) has a mean of 1.30 and ranges from 0.11 to 4.78. This indicates diverse valuation conditions across firms. Higher BM values are generally interpreted as signals of financial risk or limited growth prospects. The debt to equity ratio (DER), which measures financial leverage, has an average of 1.10, with values ranging from 0.11 to 3.66. This spread shows that some firms maintain conservative capital structures, while others are more heavily leveraged. The wide variation reinforces the relevance of DER in capturing financial risk.

Return on assets (ROA), which reflects profitability, averages 1.61 percent. The values range from -4.22 percent to 8.24 percent, indicating the presence of both loss-making and highly profitable firms. This spread offers context for understanding investor assessments of operational performance. The bond rating variable is a dummy variable. It is coded as 1 if the

issuance is rated investment grade, and 0 otherwise. The mean of 0.556 shows that just over half of the bonds in the sample are investment grade. Market return (MR) is measured as the cumulative geometric return of the national stock index over the pre-event period, from day -110 to -20. The average MR is 1.83 percent, with a standard deviation of 6.06 percent. This variable serves to control for broader market conditions before the announcement.

In summary, the descriptive statistics reveal considerable variation in firm fundamentals and market sentiment. These differences underscore the importance of evaluating whether firm-specific conditions influence how markets react to announcements of perpetual bond issuance.

Market Reaction to Perpetual Bond Announcements

To identify the most appropriate window for measuring investor responses, this study evaluates the cumulative average abnormal return (CAAR) across seven different time intervals. The tested windows are (-10, +10), (-5, +5), (-3, +3), (-1, +1), (0, +3), (0, +5), and (0, +10). These windows are chosen to capture both symmetric responses around the announcement date and delayed or forward-looking effects. For each interval, a one-sample t-test is conducted to assess whether the average abnormal return differs significantly from zero.

Table 2 reports the CAAR values, standard deviations, standard errors, t-statistics, and p-values. Among the seven intervals, the (-1, +1) window yields the highest t-statistic and is marginally significant at the 10 percent level. Based on this result, the (-1, +1) window is selected as the primary event window for the remaining analysis.

Table 2. Cumulative Average Abnormal Return (CAAR) Across Alternative Event Windows

Event Window	CAAR (%)	Std. Dev (%)	S. Error	t-stat	p-value
(-10,10)	0.46	6.74	0.00677	0.677	0.500
(-5,5)	0.10	4.17	0.00419	0.237	0.813
(-3,3)	0.11	4.07	0.00409	0.270	0.788
(-1,1)	0.51	2.67	0.00268	1.908*	0.059*
(0,3)	0.38	2.96	0.00297	1.282	0.203
(0,5)	0.58	3.24	0.00326	1.782	0.078
(0,10)	0.46	4.73	0.00475	0.964	0.337

CAAR refers to the cumulative average abnormal return across all firms within each event window. P-values are based on one-sample t-tests under the null hypothesis that CAAR equals zero.

* indicates significance at the 10% level.

To validate this result at the individual firm level, the study calculates the cumulative abnormal return (CAR) for each observation within the (-1, +1) window. To reduce the influence of extreme values, CAR is winsorized at the upper tail using the 95th percentile. This one-sided adjustment minimizes the effect of unusually high outliers while retaining all observations. The winsorized CAR values are then subjected to a one-sample t-test to evaluate whether the average abnormal return significantly differs from zero.

Table 3 shows that the mean of the winsorized CAR values is positive and statistically different from zero at the 10 percent level. This result provides empirical support that, on average, perpetual bond announcements tend to be followed by mild but significant abnormal stock price changes in the short term. The finding aligns with the semi-strong form of the Efficient Market Hypothesis (Fama, 1970), which holds that financial markets incorporate new public information efficiently.

Table 3. One-Sample t-test of Winsorized CAR Value for (-1,+1) Event Window

Variable	Obs	Mean	S. Err	S. Dev	[95% Conf. Interval
CAR	99	0.0047395	0.0024537	0.0244138	-00001298 0.0096087
Ha: mean <0		Ha: mean $\neq$ 0		Ha: mean > 0	
Pr (T<t) =0.9718		Pr (T < t) = 0.0563*		Pr (T>t) = 0.0282	

*This table reports the results of a one-sample t-test on winsorized CAR values within the (-1, +1) window. Winsorization is applied to the upper tail at the 95th percentile. The null hypothesis is that the mean CAR equals zero. * indicates significance at the 10% level.*

Taken together, the results show that perpetual bond announcements contain value-relevant information that is reflected in stock prices over a short horizon. However, the relatively large standard deviation of CAR across firms indicates that investor reactions are not uniform. A notable example is the positive stock return observed for UOB Ltd. following its 2021 announcement, which mirrors findings by Liu and Liu (2021) on the Bank of China. These cases suggest that investor perception may be more favorable when perpetual bonds are issued by financial institutions, possibly due to greater regulatory oversight and stronger capital structures. Nonetheless, regression analysis later reveals that the sector effect is only marginally significant ($p = 0.051$), calling for cautious interpretation. This variation motivates further investigation into whether firm-level characteristics help explain the observed differences in market responses, as discussed in the next section.

Determinants of Market Reaction: Main Regression Results

To examine how firm-level characteristics influence investor responses to perpetual bond announcements, this study applies a multiple linear regression model. The dependent variable is the winsorized cumulative abnormal return (CAR) over the (-1, +1) event window. The explanatory variables include book to market ratio (BM), debt to equity ratio (DER), return on assets (ROA), bond rating, and market return (MR). The results are presented in Table 4.

Table 4. Regression Results: Main Model Using Winsorized CAR (-1, +1)

Variable	β	Std. Err	t-stats	p-value
BM	0.0042491	6.74	1.53	0.130
DER	-0.0066993	4.17	-2.08	0.040**
ROA	0.1749563	4.07	1.29	0.201
Rating	-0.0020127	2.67	-0.42	0.678

MR	0.0828697	2.96	2.08	0.040**
Intercept	0.0033769	3.24	0.46	0.649
Prob> F = 0.03080			R-squared = 0.12210	

*The dependent variable is the winsorized cumulative abnormal return (CAR) over the (-1, +1) event window. BM = book to market ratio; DER = debt to equity ratio; ROA = return on assets; Rating = dummy variable equal to 1 if investment grade, 0 otherwise; MR = market return from day -110 to -20 prior to the announcement. p-values are based on two-tailed t-tests. ** indicates significance at the 5% level.*

The model yields an R-squared value of 0.122, indicating that approximately 12.2 percent of the variation in CAR is explained by the independent variables. While this value may seem modest, it is not unusual for cross-sectional regressions in event studies. As noted by MacKinlay (1997), such models often produce low R-squared values because the relationship between firm characteristics and abnormal returns is frequently non-linear or obscured. This further highlights the complexity of modeling investor behavior in response to hybrid financing announcements.

Among the five explanatory variables, two show statistically significant effects. First, the debt-to-equity ratio (DER) is negatively and significantly associated with CAR. This finding supports the hypothesis that high leverage increases perceived financial risk, particularly in the case of subordinated instruments such as perpetual bonds. It is consistent with agency theory and the concept of information asymmetry, where greater debt may reflect limited financial flexibility and elevate investor concern.

Second, market return (MR) has a positive and statistically significant effect on CAR. This result implies that favorable market conditions prior to the announcement are associated with stronger investor responses. It is in line with findings by Ammann et al. (2006), who observed that broader market sentiment can shape investor interpretation of financing announcements.

In contrast, the other explanatory variables, including BM, ROA, and credit rating, do not exhibit statistically significant effects in the main model. Although BM was hypothesized to be negatively associated with CAR, the coefficient is positive and not significant. This may indicate that the influence of BM varies depending on context and market conditions. Similarly, the lack of significance for ROA and bond rating suggests that profitability and credit quality may not consistently affect short-term market responses to perpetual bond issuance.

Robustness Checks: Country and Sector Effects

To test the robustness of the main regression results and explore the role of contextual differences, two additional regression models are estimated. These extended models include dummy variables for country and sector classification. Their inclusion is based on the possibility that institutional conditions, investor behavior, and capital market maturity vary across countries and sectors within ASEAN (Kim et al., 2023; Kim et al., 2023).

The first model includes country dummies for Thailand, Singapore, Indonesia, and the Philippines, using Malaysia as the baseline. Table 5 presents the results for this country-level specification. In this model, none of the country dummies are statistically significant. Additionally, DER and MR lose their statistical significance at the 5 percent level. These findings suggest that, after controlling for firm-specific fundamentals, investor reactions to

perpetual bond announcements do not differ systematically across countries in the sample (Ederington et al., 2015).

**Table 5. Regression Results: Model with Country Dummies
(Baseline = Malaysia)**

Variable	β	Std. Err	t-stats	p-value
BM	0.0039834	0.0029491	1.35	0.180
DER	-0.0062748	0.0040684	-1.54	0.127
ROA	0.1480685	0.1426861	1.04	0.302
Rating	-0.0011441	0.0052371	-0.22	0.828
MR	0.0766528	0.0448024	1.71	0.091*
Singapore	0.0007137	0.0064094	0.11	0.912
Thailand	-0.0026009	0.0078750	-0.33	0.742
Philippines	0.0107379	0.0191253	0.56	0.576
Indonesia	-0.0076765	0.0176880	-0.43	0.665
Intercept	0.0035256	0.0089726	0.39	0.695
Prob> F = 0.17220			R-squared = 0.12930	

The dependent variable is the winsorized cumulative abnormal return (CAR) over the (-1, +1) window. BM = book to market ratio; DER = debt to equity ratio; ROA = return on assets; Rating = dummy variable equal to 1 if investment grade, 0 otherwise; MR = market return during days -110 to -20 prior to announcement. Country dummies are included for Singapore, Thailand, the Philippines, and Indonesia, with Malaysia as the baseline. p-values are based on two-tailed t-tests. * indicates significance at the 10% level.

The second model introduces a sector dummy to distinguish financial firms from non-financial firms. Firms in the financial sector are coded as 1, and those in other sectors as 0. This model accounts for sectoral variation in capital structure policy and regulatory environment. Gropp and Heider (2010) argue that financial institutions face different capital structure constraints compared to non-financial firms.

Table 6 displays the regression results for the model with the sector dummy. In this specification, market return (MR) remains positively and significantly associated with CAR. Book to market ratio (BM) becomes statistically significant at the 5 percent level. Return on assets (ROA) and the sector dummy are both marginally significant, suggesting that firm profitability and industry classification may influence investor responses to hybrid bond announcements. In contrast, DER is no longer significant in this model.

Table 6. Regression Results: Model with Sector Dummy

Variable	β	Std. Err	t-stats	p-value
BM	0.0067958	0.0030256	2.25	0.027**
DER	-0.0025855	0.0037961	-0.68	0.498
ROA	0.2753940	0.1430478	1.93	0.057*
Rating	-0.0080773	0.0056595	-1.43	0.157
MR	0.0880079	0.0392316	2.24	0.027**
Sector	0.0148568	0.0075170	1.98	0.051*

Intercept	-0.0071712	0.0090242	-0.79	0.429
Prob> F = 0.17220			R-squared = 0.12930	

*The dependent variable is the winsorized cumulative abnormal return (CAR) over the (-1, +1) window. BM = book to market ratio; DER = debt to equity ratio; ROA = return on assets; Rating = dummy variable equal to 1 if investment grade, 0 otherwise; MR = market return during days -110 to -20 prior to announcement. Sector is a dummy variable coded as 1 for financial firms and 0 for non-financial firms. p-values are based on two-tailed t-tests. * indicates significance at the 10% level; ** indicates significance at the 5% level.*

Taken together, these robustness checks suggest that the influence of firm-specific variables is not fully consistent across all model specifications. Market return remains a stable predictor of investor response, while DER becomes less significant when contextual variables are included. In contrast, BM and ROA gain relevance in the sector-specific model. This implies that investor responses to perpetual bond announcements may also be shaped by firm valuation and industry affiliation.

Regression Analysis and Interpretation

The results of this study show that, on average, investors in ASEAN respond positively to perpetual bond announcements. This is reflected in the statistically significant cumulative abnormal return (CAR) over the (-1, +1) event window. These findings are consistent with the semi-strong form of market efficiency, which suggests that public information is quickly incorporated into stock prices. Despite their subordinated and hybrid features, perpetual bonds appear to be interpreted as part of a firm's strategic financing plan, particularly when market sentiment is positive.

However, the cross-sectional regression results indicate that investor responses vary across firms. Among the explanatory variables, two are statistically significant. First, debt to equity ratio (DER) is negatively and significantly associated with CAR. This supports the hypothesis that higher leverage signals elevated financial risk, especially in the case of instruments such as perpetual bonds. The result is in line with agency theory and information asymmetry theory (Jensen and Meckling, 1976; Myers and Majluf, 1984), which suggest that firms with excessive debt may be perceived as having lower financial flexibility. Such concerns may be amplified in the context of perpetual bonds, which lack maturity and are subordinated by nature. Second, market return (MR) is positively and significantly related to CAR. This implies that investor sentiment prior to the announcement plays a role in shaping the market's response. When broader market conditions are favorable, perpetual bond announcements may be viewed more positively by investors (Chen et al., 2021; Kayani et al., 2024; Kayani et al., 2024).

In contrast, the other variables, including book to market ratio (BM), return on assets (ROA), and bond rating, do not exhibit statistically significant effects in the main model. Although BM was expected to show a negative relationship with CAR, the coefficient is positive and not significant (Zhang et al., 2022). This outcome suggests that the interpretation of BM may vary depending on the specific characteristics of the firm or market environment. Likewise, the insignificance of ROA and bond rating indicates that profitability and external credit assessments may not independently determine short-term investor reactions to hybrid financing announcements. Overall, these results imply that investors may place more weight on

perceived financial risk than on indicators of operational strength or external ratings (Chin & Abdullah, 2013; Cornejo-Saavedra et al., 2021; Kusumaningrum, 2015).

The robustness checks reinforce the main findings. When the sector dummy is added to the model, the results show that firms in the financial sector receive more favorable market responses. This may reflect greater investor familiarity with hybrid instruments in financial industries, or clearer regulatory expectations for such issuances. In contrast, adding country dummies does not produce significant results. This suggests that sectoral differences may matter more than national differences in shaping market reactions to perpetual bond announcements in ASEAN.

CONCLUSION

This study analyzes 99 announcements of perpetual bond issuance in ASEAN (2019–2024, excluding 2020) and finds that, on average, such announcements generate positive abnormal returns, suggesting that investors perceive them as value-relevant financing strategies. The results highlight that firm-level characteristics matter: the debt-to-equity ratio (DER) negatively affects market reaction, while market return (MR) exerts a positive influence, whereas book-to-market ratio (BM), return on assets (ROA), and bond rating show no significant effects. Robustness checks confirm that sector affiliation strengthens investor response, particularly for financial institutions, while country-level differences appear less important. These findings align with signaling, agency, and information asymmetry theories, showing that investors weigh financial risk—especially leverage—more heavily than profitability or external ratings, a pattern consistent with emerging market conditions. Practically, the study provides insights for managers to consider leverage, sector context, and market timing when issuing perpetual bonds, and for regulators to strengthen classification and reporting standards to reduce uncertainty. Future research may extend this analysis by testing longer-term effects, incorporating ownership and governance variables, and exploring interaction effects across sectors and market maturity to deepen understanding of hybrid financing decisions in ASEAN.

REFERENCES

- Aloui, C., Hammoudeh, S., & Hamida, H. B. (2016). Dynamic transmissions between Sukuk and bond markets. *Journal of International Financial Markets, Institutions and Money*, 42, 125–140. <https://doi.org/10.1016/j.intfin.2016.02.003>
- Ammann, M., Blickle, K., & Ehmann, C. (2017). Announcement effects of contingent convertible securities: Evidence from the global banking industry. *European Financial Management*, 23(1), 127–152. <https://doi.org/10.1111/eufm.12095>
- Bologna, P., Miglietta, A., & Segura, A. (2023). Contingent convertible bonds in financial networks. *Scientific Reports*, 13, Article 22341. <https://doi.org/10.1038/s41598-023-48228-9>
- CFI. (2024). Perpetual bonds. Corporate Finance Institute. Retrieved May 1, 2025, from <https://corporatefinanceinstitute.com/resources/fixed-income/perpetual-bonds/>
- Chen, M., Jang, S., & Kim, W. G. (2021). Event study on the reaction of the developed and emerging stock markets to the 2019-nCoV outbreak. *International Journal of Hospitality Management*, 95, 102115. <https://doi.org/10.1016/j.ijhm.2021.102115>

- Chin, S. K., & Abdullah, N. A. H. (2013). Announcements effect of corporate bond issuance and its determinants. *Contemporary Economics*, 7(1), 5–18. <https://doi.org/10.5709/ce.1897-9254.70>
- Cornejo-Saavedra, E. E., Muñoz Mendoza, J. A., Delgado Fuentealba, C. L., Sepúlveda Yelpe, S. M., & Veloso Ramos, C. L. (2021). Announcements effect of corporate bond issuance on stock returns: Evidence from Chile. *Universidad Del Valle*, 37(71), e2411242. <https://doi.org/10.25100/cdea.v37i71.11242>
- Dutordoir, M., Lewis, C. M., Seward, J., & Veld, C. (2016). Convertible bond announcement effects: Why is Japan different? *Journal of Corporate Finance*, 37, 76–92. <https://doi.org/10.1016/j.jcorpfin.2015.12.010>
- Ederington, L., Guan, W., & Yang, L. Z. (2015). Bond market event study methods. *Journal of Banking & Finance*, 58, 281–293. <https://doi.org/10.1016/j.jbankfin.2015.03.013>
- Godlewski, C. J., Turk-Ariss, R., & Weill, L. (2013). Sukuk vs. conventional bonds: A stock market perspective. *Journal of Comparative Economics*, 41(3), 745–761. <https://doi.org/10.1016/j.jce.2013.02.006>
- Goncharenko, R., Ongena, S., & Rauf, A. (2021). The agency of CoCos: Why contingent convertible bonds are not for everyone. *Journal of Financial Intermediation*, 48, 100876. <https://doi.org/10.1016/j.jfi.2021.100876>
- Gropp, R., & Heider, F. (2010). The determinants of bank capital structure. *Review of Finance*, 14(4), 587–622. <https://doi.org/10.1093/rof/rfp030>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Kayani, U. N., Aysan, A. F., Khan, M., Khan, M., Mumtaz, R., & Irfan, M. (2024). Unleashing the pandemic volatility: A glimpse into the stock market performance of developed economies during COVID-19. *Heliyon*, 10(4), e25202. <https://doi.org/10.1016/j.heliyon.2024.e25202>
- Kayani, U. N., De Silva, T. A., & Gan, C. (2024). A systematic literature review on capital structure in emerging markets during COVID-19. *International Review of Economics & Finance*, 89, 456–478. <https://doi.org/10.1016/j.iref.2023.11.015>
- Kim, J., Lee, S., & Park, H. (2023). IFRS classification and market reaction to perpetual bond issuance. *Journal of International Financial Markets, Institutions and Money*, 78, 101534. <https://doi.org/10.1016/j.intfin.2022.101534>
- Kim, Y. J., Choi, S., Lee, E. Y., & Lee, S. J. (2023). Perpetual securities and stock prices: Korean evidence. *Journal of Contemporary Accounting & Economics*, 19(1), 100340. <https://doi.org/10.1016/j.jcae.2022.100340>
- Kusumaningrum, H. (2015). Reaksi pasar terhadap perusahaan yang menerbitkan obligasi dalam rentang waktu 2002–2014 (Tesis Magister). Universitas Indonesia.
- Li, H., Liu, H., & Siganos, A. (2017). An examination of investors' reaction to the announcement of CoCo bonds issuance: A global outlook. *Finance Research Letters*, 22, 58–65. <https://doi.org/10.1016/j.frl.2016.12.012>
- Liu, X. N., & Liu, G. C. (2020). Does the market accept the perpetual bonds issued by commercial banks? Evidence from China. *Applied Economics Letters*, 28(12), 990–994. <https://doi.org/10.1080/13504851.2020.1791311>
- Park, K., Kim, J., & Lee, M. (2018). Convertible bond announcement returns, capital expenditures, and investment opportunities: Evidence from Korea. *Journal of Corporate Finance*, 52, 197–230. <https://doi.org/10.1016/j.jcorpfin.2018.08.010>

- Smaoui, H., Mimouni, K., & Temimi, A. (2019). The impact of Sukuk on the performance of conventional and Islamic banks. *Pacific-Basin Finance Journal*, 54, 42–54. <https://doi.org/10.1016/j.pacfin.2018.11.001>
- Wang, J., & Xu, T. (2021). Stock market reaction to the announcements of perpetual bond issues – An empirical study based on Chinese listed companies. In *Lecture Notes on Data Engineering and Communications Technologies* (pp. 774–788). Springer. https://doi.org/10.1007/978-3-030-79206-0_58
- Wang, Y., & Xu, M. (2021). Stock market reaction to the announcements of perpetual bond issues: An empirical study based on Chinese listed companies. In *Proceedings of the 2021 International Conference on Management Science and Engineering Management* (pp. 785–798). Springer. https://doi.org/10.1007/978-3-030-79206-0_58
- Zhang, L., Wang, S., & Chen, H. (2022). Interconnectedness between convertible bonds and underlying stocks in the Chinese capital market: A multilayer network perspective. *Physica A: Statistical Mechanics and its Applications*, 593, 126892. <https://doi.org/10.1016/j.physa.2022.126892>