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Stock Mispricing, Corporate Governance, and SEOs Market Timing

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Structured Abstract

Purpose

This paper examines the presence of stock market timing in Thailand. We explore the potential impact that equity overpricing, stock ownership, and corporate board structure have on equity market timing.

Design/methodology/approach

We use a comprehensive dataset of 1,747 seasoned equity offerings (SEOs) in Thailand obtained from hand-picked data from 2000 to 2020. The empirical methods adopted are generalized least squares (GLS), probit regressions, probit model with continuous endogenous covariates (IV-probit) and instrumental variable (IV) with a two-stage least squares (2SLS) regression approaches. To determine the presence of equity overpricing the intrinsic value of a stock is estimated using the discounted cash flow (DCF) method, the residual income (RIM) method, Tobin's q ratio and abnormal stock returns.

Findings

We find that firms prefer to time the equity market by issuing SEOs when the stock market is hot. Moreover, hot market timers tend to keep the SEO proceeds as cash and short-term investments, which confirms that one of the reasons in conducting the equity offering is taking advantage of windows of opportunity. We find results consistent with insiders seeking to exploit information asymmetries and/or the lack of rationality of outsiders. However, the effect of the factors we consider including equity overpricing, ownership and board structures differs depending on the timing strategy and the method of stock valuation selected by the firms.

Research limitation/implication

We find that a number of complex relationships determine the presence of stock market timing, and it would be interesting to investigate these further in future research.

Practical implications

Our results have policy implications for regulators, managers and investors.

Originality/value

We provide the most comprehensive results to date about SEOs in Thailand. We introduce many explanatory variables and methodological innovations to the literature on SEOs.

Keywords: equity market timing, seasoned equity offering, equity overpricing, ownership structure, board structure, capital structure, Thailand

JEL classification: G32, G12

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1. Introduction

Timing activities in the stock markets are related to companies financing with equity when their stocks are overpriced and the cost of equity capital is comparatively low (Baker & Wurgler, 2002; Dittmar & Field, 2015; Jarallah et al., 2018). Thus, managers issue stocks when the stock market is favorable (Alti, 2006). If managers are successful in timing the equity markets, the overall cost of capital will be lower (Song, 2009). The cost of capital is a key determinant of organizational success. Market timing situations may appear where insiders have better knowledge about equity mispricing than outsiders due to information asymmetries and/or outsiders being less rational than insiders (Antoniou et al., 2000; Zheng, 2021; Zhu et al., 2020). In any event, market timing implies a lack of stock market efficiency and has clear implications for behavioral finance. Baker and Wurgler (2002) examined equity market timing and corporate leverage decisions and reported that managers have a tendency to finance with equity when their shares' prices are high, and that the impact of timing the stock market on debt-equity choice is persistent over the long term. Alti (2006) also argued that firms attempt to time the equity market by going public when the stock market is hot, but that the effect on capital structure is only a short-term. Hovakimian (2006), Kayhan and Titman (2007) and Huang and Ritter (2009) broadly support Alti (2006). Eden et al. (2021) show that market timing occurs in cross-border seasoned equity offerings which is affected by uncertainty in the host market. Some other studies, on the other hand, argue that there is no evidence of stock market timing as the equity markets are informationally efficient (see Çelik & Akarim, 2012; Lee et al., 2012; and Chen et al., 2013). As a result, this study attempts to provide further insights into stock market timing to address two research questions: (1) is there equity market timing in Thailand? (2) Do equity overpricing, ownership structure, and board characteristics impact the existence and level of equity market timing?[1]

In addition, the foregoing reveals that there is less than conclusive evidence in the existing literature about the presence of equity market timing. There is also some controversy about the methods employed in these studies. Many studies employ the market-to-book ratio as a variable of stock market timing (Baker & Wurgler, 2002; Hovakimian, 2006; DeAngelo et al., 2010), but Elliott et al. (2007) claim that this ratio is an incorrect measure of stock valuation. They contend that the market-to-book ratio can be interpreted in multiple ways including as an indicator of growth options as well as of equity mispricing, while the valuation methods can directly account for stock mispricing. Therefore, they use the residual income method (RIM) which is being prevalently used (see e.g., Andreou et al., 2021, Hwang & Lee, 2013, Skogsvik & Skogsvik, 2010, Ali, 2017), instead of the market-to-book construct in capturing stock mispricing. Lundholm and O'Keefe (2001) assert that RIM and the discounted cash flow model (DCF) should be equally effective, yet there is little research undertaken using the DCF approach in equity market timing. Dimic et al. (2019), however,

[1] In a related study, Zhao and Tang (2023) find evidence for the relevance of CEOs' characteristics in timing the mergers and acquisitions (M&As) activities and in corporate strategic decision making in China.

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resort to the bond–equity yield ratio for market timing ability in the emerging markets by the investors. Thus, our study attempts to examine the existence of equity mispricing with the intrinsic value of a stock determined by both the DCF and RIM methods.

Both the DCF and RIM methods are popular valuation models (Yoshinaga, 2022). The DCF method has strengths, and it is one of the most crucial fundamental valuation approaches (Penman, 1992). It can comprehensively and forthrightly capture all components of a firm's value until the final stage (Copeland et al., 1990). Although the use of the DCF method is consistent with the efficiency of financial markets, it is difficult to estimate the relevant terminal values in emerging markets (Wafi et al. 2015). Consequently, we follow the suggestions of Damodaran (1999) and Elliott et al. (2008) to deal with the issues of negative earnings, high debt ratios, and negative terminal value implementation of this method in the case of Thailand. The RIM method does not require the efficiency of financial market and so is quite appropriate for emerging markets such as Thailand where the market may not be very efficient (Ragab & Omran, 2006; Bettman et al., 2009; Fung et al., 2010; Wafi et al. 2015; Kim & Shamsuddin, 2008).

Moreover, the other potential determinants of stock market timing are share ownership and board structure which may be related to asymmetric information between insiders and outsiders (Korajczyk et al., 1991) and corporate capital structure (McGuiness, 2021). There are only a few prior studies inspecting these variables. For example, Chang et al. (2008) tested the effect of institutional ownership on equity market timing and showed that a higher proportion of dedicated institutional investors enhances the likelihood of taking the benefit from windows of opportunity in the stock market. In contrast, De Cesari et al. (2012) found that the proportion of institutional ownership reduces timing of the equity market. Larrain and Urzúa (2013) also argued that higher institutional ownership minimizes the propensity to time the equity market and that higher ownership concentration increases the propensity of equity market timing. As well as the limited number of studies using ownership structure in the context of equity market timing, there is a lack of research using other ownership variables particularly foreign ownership. In consequence, this study attempts to examine the effect of ownership structure, including foreign ownership and ownership concentration on the equity market timing.

Furthermore, few papers have employed board structure to investigate its effect on the equity market timing, although Gounopoulos et al. (2014) studied the size of the board of directors in the context of the incentives to conduct follow-on stock issuances, the speed of the first SEO issuance and the magnitude of SEO proceeds. Consequently, this research aims to explore the influence of board structure on equity market timing. Important factors related to the board of directors include board size, board independence, women on the board and CEO duality.

Poor corporate governance practices have long been evident in Southeast Asia, especially during the period of the 1997-1998 Asia financial crisis (Sawichi, 2009). After that, to mitigate the imbalances in governance mechanism which were one of the main causes of the crisis, governments in Southeast Asia originated programs for structural reforms

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(Stiglitz, 1999). However, it seems that weak corporate governance practices in Southeast Asia persist. For instance, Soesastro (2000) find that the reforms and recovery efforts and programs in Indonesia have been sluggish and unsatisfactory because of poor governance. Nam and Nam (2004) document that it is relatively rare to find dispersed ownership in Indonesia and Thailand. The boards of directors in Thailand are too large and lack independent but the board of directors of Indonesia are too small. In addition, the function of boards and board committees in Thailand, Indonesia and Malaysia are weak and inactive. Moreover, there is inadequate support for outside or independent directors in Thailand, Indonesia and Malaysia in matters such as the provision of essential information, access to services, personal assistance, education and training, stock-based incentive compensation and insurance coverage for personal liability. Besides, although several legal regulations have been established to improve the situation, there is an ineffective corporate governance in Vietnam (Thuy et al., 2024). Poor corporate governance practices may lead to inappropriate implementation of the financial policies of firms including capital structure policy. Consequently, it is interesting to investigate equity market timing, which is one of the key capital structure policies of firms in Southeast Asia.

Likewise, there has been insufficient research on stock market timing in Thailand. Less advanced markets such as Thailand are associated with a higher cost of equity. Thailand is particularly associated with low investor protection, bank-based corporate borrowing structure, concentrated stock ownership, family ownership, poor corporate governance and with concerns regarding the tunneling of resources (see Fairchild et al., 2014 and references therein). Other researchers have found that there is high ownership concentration in Thailand (La Porta et al., 2000; Thanatawee, 2013), which exacerbates agency problems and that the governance mechanisms of the firms are weak since the board of directors are under influence by insiders (Claessens & Fan, 2002). Moreover, the country entered the ASEAN Economic Community (AEC) in 2015, which encourages the free flow of capital, goods, service and investment. Therefore, a structural change in capital structure of Thai firms is probable because of an increase in available financing sources. These country characteristics suggest higher agency conflicts and more severe asymmetric information concerns compared to developed capital markets, which have direct implications for signaling, stock mispricing and timing of security issuances (see Hovakimian and Hu, 2016). Limpaphayom and Ngamwutikul (2004) assert that equity market timing with SEOs exists in Thailand. However, they do not directly investigate equity market timing since they imply their results from the decline of firm performance after SEO allocation. Lerskullawat (2011) reports that stock prices react negatively to SEO announcements in Thailand and insider ownership is a crucial determinant of SEO stock price reaction. Moreover, they also find that there is a negative effect of firm size on SEO underpricing in Thailand and there is underperformance for SEO firms after SEO issuances. Kumpamool (2018) finds that IPO and SEO firms tend to issue stocks when the stock markets are hot, in economic booms and bullish conditions. Moreover, corporate governance is a vital determinant of equity market timing.

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Consequently, there are a number of gaps in the extant literature on stock market timing. First, there appears some conflicting evidence about the presence of stock market timing in developed economies. The second gap is that there is little research using the DCF method in estimating the intrinsic value of equity overpricing within the framework of stock market timing. Third, there is little empirical evidence about the effects of share ownership structure, especially foreign ownership, on stock market timing. Fourth, there are few research studies considering the effect of corporate board structure on stock market timing. *Finally*, there are only a few and ambiguous findings concerning market timing in Thailand, which can have generalizable implications for the other emerging countries.

To achieve our research objectives, we use a comprehensive set of 1,747 SEOs in the Stock Exchange of Thailand (SET) from 2000 to 2020. We employ generalized least squares (GLS), probit, probit model with continuous endogenous covariates (IV-probit) and instrumental variable (IV) with a two-stage least squares (2SLS) regression methods to address our research questions. We summarize our results below: in respect of our first research question, this study provides significant evidence that firms have high incentive to time the equity market with SEO issuances only when the stock market is hot. This supports the definition of equity market timing of Alti (2006) that firms tend to time the equity market when the stock market is desirable. However, they do not prefer to time the equity market when the economy is booming and when the stock market is bullish. Besides, we find that the timing firms in the hot market prefer to maintain the SEO proceeds as cash and short-term investment. This also supports the claims of Blanchard et al. (1990); Loughran and Ritter (1997); Kim and Weisbach (2008); DeAngelo et al. (2010) that if a firm keeps the proceeds gained from selling stock as cash it is more likely that equity market timing is one of their motivations for their stock allocation. Therefore, this study provides evidence that equity market timing is present in Thailand with SEO allocations, which supports Limpaphayom and Ngamwutikul (2004). Nonetheless, we find that the timing firms are not on average successful in gaining higher SEO proceeds and they do not prefer to conduct multiple SEOs.

The second objective of our study is to explore the effects of overpriced stocks, ownership structure and board structure on the equity market timing with SEO issuances. We capture the existence of stock market timing using three alternative approaches consisting of looking at hot and cold markets following Alti (2006) and also the relatively new variables that we offer to detect stock market timing with respect to investigating economic boom & bust periods, and bullish &bearish stock markets. In addition, we measure the level of stock market timing as determined by the amount of the SEO proceeds and the quantity of follow-on stock selling which is a new approach to capture the level of equity market timing.

Our empirical analyses together with the development of the hypotheses are embedded in a unified framework that integrates agency theory (Jensen and Meckling, 1976), market timing theory (Baker and Wurgler, 2002), and

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resource dependence theory (Pfeffer and Salancik, 1978) to establish the theoretical connections between governance mechanisms and SEO timing decisions. The implications of these theories (as per our variables) are discussed as follows:

Grounded in agency theory, foreign investors have been framed as active monitors who impose stricter governance standards, curbing managerial opportunism. Additionally, foreign ownership reduces information asymmetry by signaling credibility to external markets, which aligns with the market timing theory by influencing the optimal timing of SEOs' issuances. High ownership concentration has been discussed in the context of dual agency effects. On one hand, concentrated ownership aligns the interests of managers and controlling shareholders, mitigating agency conflicts. On the other hand, entrenched ownership may facilitate timing decisions that benefit controlling shareholders at the expense of minority investors. This interplay is central to the agency theory. Independent directors have been positioned as an essential governance mechanism, limiting managerial discretion and ensuring decisions, including SEO timing, align with shareholder interests. This monitoring role, rooted in the agency theory, mitigates the risks of opportunistic behaviour in market timing. From a resource dependence theory perspective, larger boards have been shown to bring diverse resources and expertise, improving strategic decision-making, including SEO timing. However, the potential downsides of larger boards, such as inefficiency and slower decision-making, which may affect time-sensitive decisions, should also be taken into account. Gender diversity has been framed as enhancing board deliberations and decision-making quality, as suggested by both the resource dependence theory and the behavioral governance perspectives (Adams and Ferreira, 2009). Women on boards have been argued to reduce risk-taking and opportunism in SEO timing, promoting more transparent and balanced decisions. CEO duality has been discussed as centralizing decision-making power, which can either streamline decisions or increase the risk of opportunism, depending on the strength of other governance mechanisms. Within agency theory, we explain how duality interacts with independent board members and ownership structure to influence SEO timing decisions.

Our empirical results reveal that equity overpricing has a significant effect on the stock market timing with SEO allocations. However, the direction of effect relies on the method of stock valuation and the strategy of equity market timing selected by the firms. We find that when firms use the DCF method to estimate their stock value and recognize the equity overpricing, they tend to time the SEO, yet they may suffer from a low level of SEO proceeds. In contrast, if firms employ the RIM, Tobin's q ratio and abnormal stock returns methods to evaluate their stock value and acknowledge the equity overpricing, they choose to time the stock market by conducting multiple SEOs and they tend to earn a high level of SEO proceeds.

Moreover, this study explores whether ownership structure has a significant impact on the level of stock market timing. We find that higher stakes held by foreign shareholders increases the incentive to conduct the multiple SEOs.

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Moreover, more major shareholders increase the level of SEO proceeds but reduce the incentive to allocate the multiple SEOs.

We further find that board structure has a significant impact on the SEO market timing. We show that more board independence, larger board size and the presence of CEO duality all reduce the occurrence of SEO market timing during economic booms. Similarly, having more female directors on the board also decreases the probability of SEO market timing in hot markets. On the contrary, larger board size increases the level of stock market timing with multiple SEO issuances.

We contribute to the extant literature in *six* respects. *First,* this study is the first to estimate the intrinsic value of equity overpricing in the stock market timing literature employing four different methods consisting of the DCF, RIM, Tobin's q ratio and abnormal stock returns approaches. *Second,* our study departs from the literature in that it examines the effects of board size on the probability of stock market timing during economic boom periods. *Third,* our study is the first to reveal that ownership concentration and women on the board have an effect on the level of stock market timing with proceeds ratio. *Fourth,* our study is the first to show that board size has an impact on the level of stock market timing regarding the quantity of SEO issuance during the allocation period. *Fifth*, we use the IV-probit and IV (2SLS) regression methods to deal with the endogenous issue. *Finally,* this paper explores stock market timing in Thailand, which is a developing economy covered by very few studies and the implications of our study can provide relevant evidence for peer emerging markets, and for investors and portfolio managers considering investing in developing economies' stock markets. The extant studies provide contradictory evidence about whether the stock market of Thailand is weak-form efficient (Kim & Shamsuddin, 2008; Aumeboonsuke, 2012). Therefore, we contribute to the existing knowledge and debate relating to developing financial markets and our findings can potentially promote mechanisms for reducing agency problems and enhancing corporate governance in Thailand and other emerging markets.

The paper is organized as follows. Section 2 provides the development of the hypotheses. The data and methods are discussed in section 3. Section 4 exhibits preliminary analysis. Section 5 analyzes the empirical results. The empirical findings are discussed in the next section. Section 7 concludes the paper.

2. Hypothesis Development

For the hypothesis development, we integrate agency theory (Jensen and Meckling, 1976), market timing theory (Baker and Wurgler, 2002), and resource dependence theory (Pfeffer and Salancik, 1978) to establish the theoretical connections between governance mechanisms and SEO timing decisions.

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2.1. The existence of stock market timing

Baker and Wurgler (2002) argue that stock market timing influences capital structure over the long term while Alti (2006), Hovakimian (2006), and Huang and Ritter (2009) contend that the effect of stock market timing on capital structure is observed only in the short term. Yet, Lee et al. (2012), Çelik and Akarim (2012) and Chen et al. (2013) challenge that there is no stock market timing. Thus, there is highly contested evidence about the existence of equity market timing, especially in Thailand where few papers have investigated this topic. Kim and Shamsuddin (2008) claimed that the Thai stock exchange is informationally inefficient and Limpaphayom and Ngamwutikul (2004) provided some evidence of stock market timing in respect of the allocation of overvalued follow-on stock in Thailand. Further, as agency conflicts and information asymmetries are prevalent in Thailand (similar to the situations in other emerging markets), we conjecture the following:

Hypothesis 1: *Equity market timing by corporate managers exists in Thailand.*

2. 2. Equity overpricing

Baker and Wurgler (2002) and Alti (2006) claimed that firms try to time the stock market when their stocks are overvalued. Asad et al. (2020) also found that capital structure and equity mispricing are highly related to the decisions of firms in conducting SEOs. However, there is some debate about how equity overpricing should be measured. Numerous papers opt for the market-to-book ratio as a measure of equity overpricing including Baker and Wurgler (2002), Hovakimian (2006), DeAngelo et al. (2010). However, Lee et al. (1999) argued that the RIM model is better than the market-to-book ratio while Lundholm and O'Keefe (2001) found that both RIM and DCF methods provide sufficient results in pricing. Therefore, we investigate equity overpricing estimating the intrinsic value of stocks with the RIM and DCF methods divided by stock market price, Tobin's q ratio and abnormal stock returns. As some studies found that there is a negative relationship between leverage and overpricing using both the market-to-book ratio (Kaya, 2013) and the RIM method (Elliott et al., 2007), we propose that:

Hypothesis 2: *If a firm's stock is overvalued, the probability and level of equity market timing increase.*

2. 3. Ownership

Chang et al. (2008) report that firms with highly dedicated institutional shareholders obtain great benefits from timing the stock market. Accordingly, we assess that ownership structure may relate to firms' decision in the stock market timing. However, the ownership-related variables are not the only factors used by Chang et al. (2008). The proportion of foreign and controlling shareholders could also be used as variables of stock ownership structure. Thus, we consider including these factors as our variables.

2.3.1 Foreign ownership

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Foreign ownership can influence equity market timing as the extant papers find that foreign institutional ownership can mitigate agency costs (Stulz, 1999). In addition, there is empirical evidence of relationships between foreign ownership and debt ratios, yet the results are not always in agreement. For instance, Kang (1997) show that foreign ownership has a positive association with highly leveraged firms. In contrast, Dahlquist and Robertsson (2001) and Li et al. (2009) argued that there is an inverse connection between foreign ownership and leverage due to the high risks embedded in debt financing. Further, foreign shareholders may obtain benefits from timing the equity market since they are existing shareholders. Hence, our corresponding suggestion is as follows:

Hypothesis 3.1: *The probability and level of equity market timing rise with higher foreign ownership.*

2.3.2 Ownership concentration

Corporations having higher stock ownership concentration may choose to use debt rather than share capital because additional stock issuances dilutes shareholder wealth (Céspedes et al., 2010). On the contrary, Jensen and Meckling's (1976) agency theory argued that if firms have substantial stock ownership concentration, they tend to avoid debt financing since higher indebtedness brings about high financial difficulty. This causes a reduction in the role of debt to minimize the moral hazard as well as the adverse selection problems (Deesomsak et al., 2004). Margaritis and Psillaki (2010) show that there is a negative correlation between ownership concentration and leverage. As a result, ownership concentration may influence market timing decisions but this variable is neglected in the related literature. However, Wiwattanakantang (1999) reported that Thai firms that have significant ownership concentration choose to use less debt capital since the managers are typically monitored by large shareholders. Additionally, the existing major stockholders will tend to reap the benefits from the stock market timing. Therefore, we posit the following statement:

Hypothesis 3.2: *The probability and level of equity market timing rise with greater stock ownership concentration.*

Moreover, concentration of stock ownership is established by the Herfindahl-Hirschman index (HHI) since cumulative concentration can help assess only the equal weight of all shareholders whereas the size of stockholding is captured by HHI (Hay & Morris, 1979). In addition, Goergen and Renneboog (2001) assert that the HHI can capture stock ownership distribution while this method is not influenced by the allied voting power of the individual equity holders.

2.4. Board structure

Considering the agency costs theoretical framework, Mehran (1992) found that conflicts between executives and stockholders can be mitigated by the efficiency of the board of directors. Therefore, we use board structure, including board independence, board size, women on the board and the presence of CEO duality on the board as being potentially relevant to the equity market timing decisions.

2.4.1 Board independence

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The number of independent board members can affect stock market timing as the literature shows that high board independence impacts leverage (Lim et al., 2007) and improves corporate governance quality (Gillan & Starks, 2000). Stock market timing involves taking advantage of information asymmetries between insiders and outside investors. Thus, firms with more independent board directors are expected not to time the stock market. Hence, we conjecture that:

Hypothesis 4.1: *The probability and level of equity market timing fall with more independent board members.*

2.4.2 Board size

To our best knowledge**,** there is no study associating board size with the equity market timing. Yet, there are some papers investigating the effect of board size on debt-equity mix, so this connection seems quite plausible. Berger et al. (1997) state that a higher number of board directors is associated with lower leverage, while Lim et al. (2007) contend that there is a positive link between them. Wang (2012) and Upadhyay (2015) report that there is a significantly positive association between leverage and board size; hence, we propose that:

Hypothesis 4.2: *The probability and level of equity market timing decline with larger board size.*

2.4.3 Women on the board

The existing literature shows that the efficiency of firms' monitoring can be enhanced by greater board diversity (Carter et al., 2003). Adams and Ferreira (2009) also report that women directors on boards have greater participation in board meetings. Additionally, Alves et al. (2015), Wang et al. (2023) and Pandey et al. (2023) indicate that board composition influences financing decisions and performance of firms. Thus, we employ the percentage of women on the board as a potential determinant of equity market timing, noting that there is no paper directly examining this issue. Verheul and Thurik (2001) showed that the debt financing is not affected by the mix of male and female directors. Alves et al. (2015) disputed that boards of directors diversified by gender are associated with raising external equity, in contrast, a high gender diversity on the board leads to low financing with short term maturity of debt. Thus, we posit that:

Hypothesis 4.3: *The probability and level of equity market timing increase with a higher proportion of women directors on the board.*

2.4.4 Duality of CEOs

CEO duality occurs when the CEO is also the chairperson on the board of directors. The link between CEO duality and the corporate financing decisions has rarely been the studied in the literature. However, there is some evidence for this relationship. For instance, Abor (2007) alleges that leverage is positively associated with CEO duality. Similarly, Bokpin and Arko (2009) reveal that debt financing is preferred as a new financing source by entrenched CEOs. Thus, the CEO duality can potentially be a factor influencing stock market timing. Furthermore, no paper in the extant literature has directly focused on this issue. Therefore, this factor is also considered in our study. Our next expectation is as follows:

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Hypothesis 4.4: *The probability and level of equity market timing decrease with the existence of CEO duality.*

3. Data and methods

3.1 Sampling design and data sources

The data for SEOs are collected from three main sources, the SET's Fact Books which are available in the SET's official website, the SETSMART (SET Market Analysis and Reporting Tool) database which is a unique database provided by the SET and Reuters Thomson One database (acquired later by Refinitiv). The time period of SEO issuances is from 2000 to 2020, and we consider public offerings, private placements, rights issues for existing shareholders and warrants. Moreover, the data excludes financial companies, property funds and real estate investment trusts (REITs) sectors and firms with unavailable data. Furthermore, in line with the extant literature (e.g., Baker and Wurgler, 2002; Alti, 2006) we exclude observations where EBITDA/A, INV/A, or DIV/E exceed the threshold of 100%. In addition, in the prior studies on SEOs, observations which have proceeds of less than 5% of total assets are dropped; however, we cannot reasonably eliminate these observations from our sample since the size of our market is relatively small. In summary, our final sample consists of 1,747 unique observations for SEOs. The data for ownership and the board of directors are obtained from Form 56-1, which is the firms' annual report submitted to the Securities and Exchange Commission (SEC), the Bloomberg database and the SETSMART database. The financial data, market price data, and economic data are collected from the Datastream and Bloomberg databases and the financial reports from the SEC and the SETSMART databases. The date and types of SEO issuance data are obtained from the SET's Fact Books and the SETSMART database. Our industry groups are categorized following the SET with seven groups (i.e., agri & food, consumer products, industrials sector, property and construction, resources, services & technology).

3.2 Variables definition

3.2.1 The dependent variables

The presence of equity market timing. Stock market timing is assessed using three alternative methods based on the hot & cold market method discussed by Alti (2006), the rate of economic (GDP) growth, and the equity market index. The hot and cold market method captures the presence of stock market timing by investigating the volume of stocks allocated over these markets. For the definition of hot & cold markets, Alti (2006) employed the three-month moving average of the volume of stocks issued each month, and then the median of the detrended moving average of volume is used to separate hot and cold markets. The GDP growth rate method is based on evidence of the involvement of macroeconomic factors in timing equity markets (Korajczyk & Levy, 2003; Cook & Tang, 2010). There is some evidence of stock market timing when the market is in a bullish trend (Limpaphayom & Ngamwutikul, 2004; Plotnicki & Szyszka, 2014). The three-month moving average and the median of these measurements are employed in a similar way to the method of Alti

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(2006) but the quarterly real GDP growth rate and the monthly growth rate of the stock index are used instead of the volume of SEOs.

The degree of equity market timing. The stock market timing level has definitions using two methods, i.e., the proceeds from equity issuance and the number of stock issuances. However, the primary SEOs proceeds are not available for about 75% of Thai companies, so it is necessary to use the net proceeds data instead of primary (gross) proceeds data.

3.2.2 The explanatory variables

The equity overpricing. Stock overpricing is quantified by a binary factor indicating equity overpricing (*OVP*) when the ratio of the intrinsic value of the stock scaled by the stock's market price (*V/P*) is less than 1. The stock's intrinsic price is estimated using the discounted cash flow (DCF) method and the residual income (RIM) method.

For DCF method, we follow the estimation of Stowe et al. (2007) using the formula below:

$$V_0 = \sum_{t=1}^{T} \frac{FCFF_t}{(1+WACC)^t} + \frac{FCFF_{T+1}}{(WACC-g)*(1+WACC)^T} \quad (1)$$

where V_0 is the intrinsic value of the stock at the end of fiscal year 0 where year 0 is the prior SEO year. *FCFF* is the free cash flow to the firm estimated by earnings before interest and taxes (*EBIT*) minus corporate tax plus depreciation & amortization minus the change in net working capital minus capital expenditures plus after-tax asset sales (Kaplan & Ruback, 1995). *T* is equal to two years (Warr et al., 2012). g[2] is the long-term growth rate at firm level. *WACC* stands for the weighted average cost of capital where we employ the capital asset pricing model, *aka*, CAPM to evaluate the cost of equity.

A disadvantage of the DCF approach is that it is not possible to estimate for firms which have negative earnings and high debt ratios (Damodaran, 1999). It also gives unreasonable results if the companies have negative terminal values because this implies that the firms reinvest in projects which have negative net present values (NPVs), which is inappropriate for real businesses (Elliott et al., 2007). There are several methods for dealing with these issues. First, Damodaran (1999) suggested actions to "normalize earnings "and "reduce leverage". Normalization of earnings is to replace negative earnings with the average historical earnings, while the leverage reducing approach is to diminish a firm's leverage since, when firms grow their operations over time, this has the effect of minimizing the cost of debt. Moreover, Elliott et al. (2008) recommended that as positive abnormal earnings are found in firms with growth opportunities, it is appropriate to employ calculations which use more than two years of data to ensure that positive

[2] We assume a long-term nominal growth rate of the firm of 3%. That is based on the average of actual real GDP growth rate (3.49%) per year and the average actual inflation rate (2.59%) per year during 2000-2020 in Thailand following Kaplan and Ruback (1995); Gilson et al. (2000) and Penman (2001) who employ a fixed rate of terminal growth rate of 4%, 4% and 3%, respectively. Moreover, the the equity valuation is calculated by firm value minus book value of debt and book value of preferred stock. Then, the intrinsic value is estimated by equity value divided by number of common stocks issued.

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earnings are found. Another option of dealing with the negative terminal value issue is replacing the negative terminal value with 0 as firms will not invest in projects with negative NPV because of wealth dilution. Therefore, taking account of the previous literature, we resort to mixed methods as per the above approaches to deal with unsuitable intrinsic stock prices of firms. However, some companies cannot be dealt with satisfactorily because of several issues such as negative earnings in every year, significantly high leverage, or negative cost of capital, hence we drop the data for these companies. For the RIM procedure, we follow the estimation of Warr et al. (2012) using the formula below:

$$V_0 = B_0 + \sum_{t=1}^{n} \frac{(E_t - (k_e * B_{t-1}))}{(1+k_e)^t} + \frac{TV}{(1+k_e)^n * k_e} \quad (2)$$

$$TV = \frac{(E_t - (k_e * B_{t-1})) + (E_{t+1} - (k_e * B_t))}{2} \quad (3)$$

where V_0 is the intrinsic value of equity at the end of fiscal year 0 where year 0 is the prior SEO year. B_0 stands for the book value of equity at time-0. B_{t-1} denotes the book value of equity at time t-1. E_t represents the expected value of future earnings for year t at time 0. k_e is the cost of equity. TV is the terminal value and N is equal to two years.

However, as the data for expected future earnings (E_t) for Thai firms are unavailable in both Datastream and Bloomberg, a perfect foresight model which employs the actual earning data is used in our study. Again, the estimation of intrinsic price is controlled to avoid the problem of negative intrinsic value by normalizing earnings and reducing leverage (Damodaran, 1999). Furthermore, if these methods cannot solve the negative intrinsic values problem for some firms, other approaches including replacing negative terminal values with 0 and the extension of earnings estimation over two years are employed to deal with unsuitable intrinsic values. In the last step, we drop the value of some firms where these methods cannot solve the issue of negative intrinsic value.

The reasons for selecting the explanatory variables including equity overpricing, foreign ownership, ownership concentration, independent board members, board size, women on board and CEO duality are as follows. Equity overpricing is possibly a crucial determinant of equity market timing as Baker and Wurgler (2002), Dittmar and Field (2015) and Jarallah et al. (2018) claim that firms tend to finance with equity issuance when their stocks are overvalued to minimize cost of capital. Over recent years, there has been a significant increase in global economic and financial liberalization, which this increases the presence of foreign investors in emerging markets (Thanatawee, 2021). Thus, it is interesting to investigate this factor in the context of equity market timing especially as there are currently few research studies dealing with this issue. Firms with higher ownership concentration may avoid the issue of new shares to avoid the dilution of shareholder wealth (Céspedes et al., 2010). Thus, it is likely that ownership concentration may relate to equity market timing with SEO issuance. The probability of equity financing increases with higher board independence

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as stronger corporate governance leads to a decrease in agency costs (Mande et al., 2012). Moreover, Ferreira and Laux (2016) find that firms with higher board independence tend to gain higher SEO returns. Hence, it is possible that board independence may be associated with SEO market timing. Firms with smaller board size prefer to use equity financing (Abor, 2007). Moreover, Dasilas and Leventis (2013) find that firms with smaller boards tend to earn higher SEO returns. Thus, we investigate the effect of board size on the SEO market timing. In addition, it is likely that women may be more conservative and risk averse than men (Byrnes et al., 1999). Hence, women on boards may encourage firms to follow more conservative policies. Moreover, Garcia and Herrero (2021) find that the proportion of female directors is the most powerful board characteristics for decisions about capital structure. Besides, they find that firms with higher proportions of female directors on their board tend to use equity financing. As a result, we include the proportion of women on the board to test equity market timing which is one of the key policies affecting capital structure. CEO duality is a key corporate governance variable of interest (Syriopoulos and Tsatsaronis, 2012). Puwanwnthiren et al. (2019) find that firms with CEO duality tend to reduce undertaking accelerated SEOs. Additionally, Abor (2007) and Bokpin and Arko (2009) find that dual CEOs do not prefer to use equity financing. Thus, it is likely that CEO duality may be an influential determinant of SEO market timing.

3.2.3 The control variables

The control factors are profitability of the firms, firm size, asset tangibility, dividends, cash holdings, types of SEO allocation, nominal GDP growth rate and industry dummies. Table 1 defines the variables.

(Insert Table 1 Here)

3.3 Empirical analysis

3.3.1. Regression model

Cross-sectional analyses are used to assess the behavior of companies during SEO events (see e.g., Masulis and Corwar, 1986; Loughran and Ritter, 1997; and Kim and Weisbach, 2008). The methods adopted in our paper are generalized least squares (GLS) and probit regressions. The GLS regression setting is conducted for the models with continuous dependent variables and allows for heteroscedasticity (Gil-Bazo & Ruiz-Verdu, 2009). The probit regression is used for the models with binary dependent variables and White's (1980) standard errors are used to estimate the coefficients' significance levels. The regression analysis is conducted for models which address two areas: (1) the presence of equity market timing with SEO issuances (2) the effect of stock overpricing, ownership and board structures on the presence and level of equity market timing.

a) The presence of equity market timing with SEO issuances

After classifying the firms that time the equity market by reference to issuance in hot cold markets, we examine whether the firms that are identified as hot firms keep the proceeds from stock issuance as cash. If there is empirical

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evidence of this, it means that the firms tend to time the equity market (Blanchard et al., 1990; Loughran & Ritter, 1997; DeAngelo et al., 2010). The GLS regression follows the model of Kim and Weisbach (2008). However, as there is limited data for primary proceeds which are unavailable for almost 75% of the sample, the net proceeds data are employed instead. Consequently, we cannot measure the other sources of funds for the SEO samples, so we drop this variable from the equation. The equation is as follows.

$$Y = \beta_0 + \beta_1 ln\left[\left(\frac{NPA}{TA_0}\right) + 1\right] + \beta_2[TA_0] + \sum_{i=2001}^{2020} \theta_i YEAR + \sum_{j=2}^{7} \lambda_j Indus + \varepsilon_i \quad (4)$$

where Y is classified into 2 groups: asset-based variables (Y_1) (total assets (TA), cash (CA), cash and short-term investments ($C\&S$), inventory (Inv) and property, plant, and equipment (PPE)) and expenditures (Y_2) (capital expenditure ($CAPEX$), dividend payout ($DivP$) and long-term debt repayment ($RepLTD$)[3]). Moreover, each variable is in logarithmic form to mitigate the effect of outliers.

i) The asset-based variables (Y_1) are the items from the balance sheet calculated as one plus the change in each item (V) normalized by total assets (TA).

$$Y_1 = ln\left[\left(\frac{V_t - V_0}{TA_0}\right) + 1\right] \quad (5)$$

where V is total assets, cash, cash and short-term investment, inventory and property, plant and equipment. Year t is 1,2,3,4 years after year 0 and Year 0 is the fiscal year-end prior to the SEO.

ii) The expenditures (Y_2) are the items from the income statement and cash flow statement calculated as one plus the accumulation of each item (V) normalized by total assets (TA).

$$Y_2 = ln\left[\left(\sum_{i=1}^{t} \frac{V_i}{TA_0}\right) + 1\right] \quad (6)$$

where V is capital expenditure, dividend payment and long-term debt repayment. t is 1,2,3,4 years after year 0 and 0 is the fiscal year-end prior to the SEO.

b) The effect of equity overpricing and board structure on equity market timing

As the presence of stock market timing is based on discrete variables taking the value 0 or 1, a probit regression is employed to investigate into this association. The degree of timing the equity market is a continuous variable; thus, a GLS regression is produced for these models. Furthermore, we also conduct IV-probit and IV (2SLS) approaches to test for the endogenous issue. The lagged values of equity overpricing up to two lags are our internal instruments. Moreover, we use the explanatory variables lagged one period to mitigate the endogeneity issue. Accordingly, the model is set out as below.

[3] The R&D data for Thai firms are not available and approximately 95% and the mergers & acquisitions data are also not available. Thus, these variables are excluded from the analyses.

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$$Y_t = \beta_0 + \beta_1 OVP_{t-1} + \beta_2 FROWN + \beta_3 HHI3 + \beta_4 IBO + \beta_5 BOZ + \beta_6 WBO + \beta_7 CEOD + \sum_{k=1}^{7} \gamma_k Control_{t-1} + \sum_{i=2}^{7} \delta_i Indus + \varepsilon_i \quad (7)$$

where, Y_t which is equal to 1 which is calculated in a hot equity market (*Hot_E*), an economic boom period (*Boom*), a bullish stock market (*Bullish*) and a proceeds ratio (*PA/TA*) and the amount of stock issued (*DG*). *t* is the SEO year. The main explanatory variables are equity overpricing (*OVP*), Tobin's q ratio (*Tobinq),* abnormal stock returns (*ASR),* foreign ownership (*FROWN*), ownership concentration (*HHI3*), board independence (*IBO*), board size (*BOZ*), women on the board (*WBO*), CEO duality (*CEOD*). A set of control variables consists of profitability, firm size, asset tangibility, dividends, cash, private placement and nominal GDP growth rate. *Indus* represents the industry fixed effects.

4. Preliminary analyses

4.1 Summary statistics

Table 2 lists the descriptive statistics regarding the 1,747 SEO events during 2000-2020. On average, approximately 66% of the sample companies tend to time the equity market by allocating their SEOs when the market is in a hot period. In contrast, they seem to have low motivation to time the stock market by issuing their follow-on stocks when the economy is in expansion and the stock market is bullish with average figures of 45.5% and 43.6%, respectively. The mean value of net proceeds divided by total assets is 9.19% which is a relatively high ratio compared to the average proceeds ratio found in Asia, Japan, and Australia & New Zealand of 5.7%, 10.1% and 0.6%, respectively according to Kim and Weisbach (2008). In addition, the mean number of SEO allocations per year is around 3. In addition, the means of the equity overpricing using the DCF, RIM and Tobin's q methods are 52.43%, 71.15% and 78.25%, respectively, indicating that the stocks of Thai SEO firms are overvalued. This is consistent with Warr et al. (2012) who show that the stocks of US non-financial listed firms were overpriced by 97.50% on average. However, the mean of the equity overpricing using the abnormal stock returns is 49.06%, suggesting that the stocks of Thai SEO firms are undervalued.

Regarding the ownership structure, the average proportion of ownership concentration of SEO firms is12.57%. Furthermore, the mean value of foreign ownership is 12.18% which is very close to the figure reported by Wiwattanakantang (1999) of 12.10%. Moreover, the mean percentages of the board structure variables of board independence, board size, women on the board and CEO duality are 38.81%, 9.9078, 16.52% and 15.86%, respectively. The table also shows the statistics for the control variables.

(Insert Table 2 Here)

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4.2 The correlation coefficients

Table 3 demonstrates the correlations among the variables. The results show that no peer variables have a higher correlation than the threshold of 0.80, and the variance inflation factors, i.e., VIFs, are below 10. Hence, our models do not suffer from multicollinearity.

(Insert Table 3 Here)

5. Empirical results

5.1 The existence of equity market timing

5.1.1. The detrended moving average of equity market timing

This study captures stock market timing using 3 procedures: the amount of stock issuance, the growth of the economy and the extent of the stock market index. The three-month detrended moving average is utilized to classify the timing of the equity market following Alti (2006). The outcome of these identifications is shown in three groups as follows.

Hot & cold markets

Figure 1 illustrates the number of SEO issuances of listed firms from 1st January 2000 to 31st December 2020. The highest monthly number of SEO is 31 allocations[4] in May 2013. The detrended data of the three-month moving average is displayed in figure 2 with absolute difference value with a median value is -0.17. A month with the detrended moving average more than the median is classified as a hot month and otherwise it is classified as a cold month. Based on this result, there are 1,160 hot and 587 cold allocations which time and fail to time the equity markets, respectively.

(Insert Figures 1-2 Here)

Economic boom & bust periods

Figure 3 exhibits the quarterly real GDP growth rate in Thailand over 2000 to 2020. This is used to determine the periods of economic boom and bust. The maximum value of the real GDP rate is 9.38% in quarter 1 of 2012 whereas the minimum value is -13.09% in quarter 2 of 2020 which corresponds to the Covid-19 pandemic. The median real GDP growth rate is 0.84%. We use a similar method used to identify hot and cold markets with a three-quarter detrended moving average for categorizing the economic boom and bust periods. The median of the detrended moving average is -0.22% in figure 4. Times of economic expansion are indicated by values which are higher than the median while the periods of recession are otherwise. Consequently, our sample comprises 795 and 952 SEO issuances during the economic expansion and recession periods, respectively.

(Insert Figures 3-4 Here)

Bullish & bearish stock markets

[4] We merge the number of SEOs of the companies that issued SEO more than once for one fiscal year into one allocation.

Figure 5 reports the monthly market index returns of the Thai stock market from 2000 to 2020. The highest value is 23.62% in January 2001 and the lowest value is -30.18% in October 2008 during the global financial crisis, with the median growth of 1.02%. The three-month detrended moving average is used to categorize bullish and bearish stock markets. The median of the detrended moving average is -0.06% as shown in figure 6, a bullish stock market is captured by a greater growth rate than the median, while a bearish market is identified by a lower value than the median. Consequently, we can classify our samples into 762 and 985 allocations of SEO stocks when the stock market was bullish and bearish, respectively.

(Insert Figures 5-6 Here)

Overall, the above suggests that firms tend to issue the SEO stocks when the stock market is hot rather than when the economy is in expansion or when the stock market is in a high return period.

5.1.2. Statistical differences in mean values between timing and non-timing equity markets

In Alti (2006), there are two measures of stock market timing. The first is based on the supposition that firms have more incentive to sell their stocks when the equity market is in a good period. The second is that the firms that issue their equity when the stock market is in a positive period gain more proceeds than the firms who allocate their equity when the stock market is in a negative period. In consequence, we assess the amount of proceeds from selling the stocks of companies for SEO event to capture the presence of equity market timing in Thailand.

Table 4 shows the results of the mean value test of the proceeds ratio and the number of stock issuance for SEO samples. The results show that the mean value of the proceeds ratio for hot firms is significantly lower than cold firms at the 5% level. Similarly, the mean value of the number of stock issuance for hot firms is also significantly lower than cold firms at the 10% level. Nevertheless, the average value of the proceeds ratio and the number of stock issuances for boom firms and bust firms and for bullish firms and bearish firms are insignificant at any level. Therefore, this suggests that the firms that issue SEOs during the hot periods gain lower money than those that issue SEOs during the cold periods. There is no difference in the amount of money gained from SEO issuances during boom periods and bust periods and bullish periods and bearish periods. Thus, this implies that firms that attempt to time the equity market during hot periods are not successful in earning higher proceeds and they do not prefer to issue multiple SEOs. This does not support the presence of equity market timing.

(Insert Table 4 Here)

5.1.3. The motivation of spending the proceeds of stock issuances of equity market timers

Table 5 shows the results of the motivation of spending the SEO proceeds obtained from the GLS and IV (2SLS) regression methods for hot firms. The results illustrate that all parameter estimations of the net SEO proceeds are significantly positive at least at the 5% level, except the models of Δ *TA4* and $\sum$*CAPEX 1* which are statistically

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insignificant. This indicates that hot timing firms tend to spend the net proceeds gained from SEO issuances on total assets, cash holdings, cash and short-term investment holdings, inventory investment, property, plant and equipment investment, capital expenditure, dividend payout and long-term debt repayment over the 4-year time period after the SEO event. Importantly, this implies that the equity market timing may be one reason for issuing follow-on stocks during the hot period as timing firms have an incentive to keep the proceeds gained from the SEO allocations as cash and cash and short-term investment.

(Insert Table 5 Here)

5.2 The effect of equity overpricing, ownership, and board structure on equity market timing

5.2.1. The presence of equity market timing

Table 6 provides the empirical results for the marginal effect of the robust probit regression models. The probability of stock market timing with SEO events are estimated in three different ways, hot equity market (*Hot_E)* in models 1-2 and 7-8, economic boom (*BOOM*) in models 3-4 and 9-10, and bullish stock market (*BULLISH*) in models 5-6 and 11-12. We also conduct IV-probit for all models. However, the insignificant values of the Wald test statistics of exogeneity for all models indicates that there is no endogeneity; thus, a standard probit regression would be sufficient.

Based on the models for hot equity markets, the results show that $OVP(DCF)_{t-1}$ are significantly and positively related to *Hot_E* at the 1% level. Moreover, $Tobinq_{t-1}$ are significantly and positively associated with *Hot_E* at the 10% level. This indicates that equity overpricing evaluated by DCF and Tobin's q method increases the probability of equity market timing with the SEO issuance during the hot period. In contrast, $HHI3_{t-1}$ has a significantly negative effect on *Hot_E* at the 5% level. This suggests that firms with high ownership concentration tend to reduce the probability of equity market timing with the SEO issuance during the hot period.

Regarding the models for economic booms, the results show that IBO_{t-1}, BOZ_{t-1}, and $CEOD_{t-1}$ are significantly and negatively associated with *Boom* at least at the 10% level. This indicates that firms with more independent directors, more directors' members, and with the existence of CEO duality on the board have less incentives to time the equity market timing with SEO allocations during economic boom periods.

According to the models involving bullish stock markets, the results show that the coefficients for all variables of equity overpricing, ownership, and board structure are statistically insignificant. This suggests that these factors are not related to the probability of stock market timing with the SEO allocations during bullish stock market periods.

(Insert Table 6 Here)

5.2.2. The level of equity market timing

Table 7 reports the GLS and IV (2SLS) results for the effect of stock overpricing, ownership, and board structure on the level of equity market timing. The level of equity market timing estimated by the SEO proceeds divided by total

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assets (PA/TA_t) in the models 1-2 and 5-6, and the number of SEO issuances (DG) in the models 3-4 and 7-8. We also produce the IV (2SLS) for all models. The insignificant values of Durbin χ2 and Wu-Hausman F for all models except model 6 suggest that the independent variables are exogenous; thus, our models do not suffer from endogeneity issues. Therefore, the GLS method is more preferred than the IV (2SLS) method for these models. However, the significant values of Durbin χ2 and Wu-Hausman F for model 6 at the 5% level indicate that this model suffers from endogeneity. Moreover, the insignificant values of Sargan χ2 and Basmann χ2 tests suggest that our instruments are valid. Hence, the IV (2SLS) method is better than the GLS method for model 6.

For the models of SEO proceeds ratio, the results show that $OVP(DCF)_{t-1}$ is significantly and inversely linked to PA/TA_t at the 1% level, while $OVP(RI)_{t-1}$, $Tobinq_{t-1}$ and ASR_{t-1} are significantly and directly linked to PA/TA_t at least at the 10% level. This suggests that when a firm's stock value is overvalued using the DCF method, firms tend to gain low proceeds from SEO issuance. On the other hand, when the stock value of firms is overvalued using the RIM, Tobin's q ratio and abnormal stock returns method, firms tend to gain high proceeds from SEO issuances. Besides, the coefficients of $HHI3_{t-1}$ are significantly and positively on PA/TA_t at least at the 10% level. This reveals that firms that have higher ownership concentration tend to earn higher proceeds from SEO issuances. Conversely, the coefficients of WBO_{t-1} are significantly and negatively on PA/TA_t at the 10% level. This suggests that companies with more female directors on the board tend to earn lower proceeds from SEO allocations.

For the models of the number of SEO issuances, the results show that $OVP(RI)_{t-1}$, $Tobinq_{t-1}$ and ASR_{t-1}, $FROWN_{t-1}$, *and* BOZ_{t-1} have a significantly positive effect on DG_t at least at the 10% level. This indicates that firms with equity overpricing evaluated by the RIM, Tobin's q ratio and abnormal stock returns methods, or with more foreign shareholders, or with more directors' members on the board have higher incentives to issue multiple SEOs. In contrast, $HHI3_{t-1}$ has a significantly negative effect on DG_t at the 10% level. This suggests that firms with higher ownership concentration have less incentive to allocate multiple SEOs.

(Insert Table 7 Here)

6. Discussion

6.1 The presence of equity market timing in Thailand

This study provides some evidence that firms tend to issue SEOs when the stock market is hot (66.40%) rather than when the economy is in a boom period (45.51%) or when the stock market is bullish (43.62%). Hence, this is consistent with Alti (2006) who argues that one definition of equity market timing is that firms prefer to allocate their stocks when the market is hot.

On the other hand, the results of a mean value difference test show that hot firms gain a significantly lower proceeds ratio than cold firms and the number of their SEO issuances is less frequent than cold firms. This is not

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consistent with the findings of Alti (2006) who report that there is a highly significant difference in the proceeds ratio between hot and cold markets. The difference in classification for hot and cold firms may be the reason for this dissimilarity. As the figure for the moving average value in this study contains zero values in some months, we could not use the proportional difference method for calculating the detrended moving average following Alti (2006). Consequently, we employed the actual difference method for this measurement. Thus, this is a limitation of this study. Moreover, we focus on Thailand which is an emerging market and has unique characteristics for ownership and board structures, while Alti (2006) examined US firms which are in a developed market and have a different corporate governance mechanism. This indicates that different market orientations and corporate environments may have significant effects on the success of equity market timing with SEO issuances.

Nevertheless, our findings reveal evidence that timing firms during hot periods tend to keep their proceeds as cash and short-term investments after SEOs are conducted. This is consistent with Blanchard et al. (1990), Loughran and Ritter (1997), Kim and Weisbach (2008) and DeAngelo et al. (2010) who asserted that there was stock market timing because of the increase of cash after equity issuance. This indicates that firms timing the market may lack immediate growth opportunities, opting to retain SEO proceeds as cash and short-term investments.

As a result, our findings reveal evidence that Thai firms tend to time the equity market with SEO issuances only when the stock market is in a hot period rather than when the economy is booming or when the stock market is in a bullish period. Furthermore, the hot timing firms tend to maintain the SEO proceeds as cash and short-term investments. Thus, it seems that equity market timing with SEO allocation exists in Thailand. This is in line with Limpaphayom and Ngamwutikul (2004) who find that the performance of Thai firms falls after the SEO issuances, implying that there is equity market timing with SEO issuance in Thailand. However, we directly investigate the presence of equity market timing during favorable periods, whereas they only imply their results from the decrease of firm performance after the SEO event. Thus, our study differs from Limpaphayom and Ngamwutikul (2004) and, to our best knowledge, our study is the first study in Thailand providing important evidence from the direct investigation of equity market timing with the SEO issuances. Nonetheless, we find that timing firms in the hot market are not successful in gaining higher proceeds from SEO allocation and they do not prefer to issue frequent SEOs.

6.2. The effect of equity overpricing, ownership, and board structure on equity market timing

6.2.1. Equity overpricing

This study has shown that equity overpricing estimated by the DCF and abnormal stock returns methods has a positive influence on the probability of SEO market timing during hot markets but this factor estimated by the DCF has a negative influence on the SEO proceeds ratio. On the other hand, equity overpricing estimated by the RIM, Tobin's q ratio and abnormal stock returns methods is positively associated with the SEO proceeds ratio and the number of SEO

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issuances. The positive effect is consistent with Baker and Wurgler (2002) and Elliott et al. (2007, 2008) who report that overvalued stock is a crucial factor in firms timing the stock market since there is asymmetric information between insiders and outside investors. However, the negative impact is consistent with other studies (see e.g., Venkatesh & Neupane, 2005; Ekkayokkaya & Pengniti, 2012) who found that Thai firms underprice their stocks when they issue their stocks in the first time. Moreover, our findings about the negative effect are documented by Spiess and Pettway (1997) and Loughran and Ritter (1995) who reported that the underpricing of equity signals the high quality of the company, so the firms who underprice SEOs gain more proceeds. Consequently, this study reveals evidence that when firms use the DCF method to evaluate the equity overpricing, they have a substantial incentive to time the stock market with the SEO issuance during the hot period. However, they may suffer from the low level of SEO proceeds ratio. In contrast, when firms use the RIM, Tobin's q ratio and abnormal stock returns methods to measure equity overpricing, they prefer to time the equity market with the multiple SEOs and they tend to earn high proceeds. Thus, this implies that the method of stock valuation is a crucial factor to estimate whether stocks are overvalued and to implement the strategy of equity market timing with SEO allocation.

6.2.2. Ownership structure

Foreign ownership

Our findings show that foreign ownership has a positive effect on the level of equity market timing with multiple SEOs. This is consistent with Dahlquist and Robertsson (2001) and Li et al. (2009) who find that firms with high foreign ownership choose to use less debt as they are outside investors and acting as monitors of SEO firms. Thus, they prefer to avoid high leverage because of high bankruptcy cost and financial stress but they have high incentive to issue shares instead of debt capital. As a result, owners encourage their corporations to issue multiple SEOs. Moreover, our findings are in line with Luu et al. (2022) who find that there is a quick reaction of foreign investors to the information of SEO announcement; thus, they gain higher stock returns after a SEO event. This implies that it is possible that foreign investors strongly react to SEO announcement to increase stock returns. Hence, they prefer the firms to issue several SEOs.

Ownership concentration

We find that high ownership concentration is associated with a low probability of equity market timing with SEO issuances during hot periods and a low level of equity market timing with multiple SEOs. This signals that major shareholders in SEO firms do not prefer to time the equity market when the market is hot and by issuing multiple SEOs. This is consistent with the claim of Stulz (1988) that major shareholders prefer to maintain their voting rights and avoid their wealth being diluted by new shareholders. On the other hand, our findings show that concentrated stock ownership positively influences the SEO proceeds ratio. This suggests that major shareholders in SEO firms have high incentives to time the equity market when the firms can gain high proceeds. This is documented by the finding of Wiwattanakantang

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(1999) that major shareholders in SEO firms prefer to use less debt due to the high pressure of monitoring from creditors. Therefore, this study explores that firms with higher ownership concentration avoid timing the equity market with SEO issuances when the stock market is in a hot period and to issue the multiple SEOs. Nevertheless, they switch to timing the equity market if they can earn a high level of SEO proceeds.

6.2.3. Board of directors

Board independence

Our evidence reveals that a high level of board independence reduces the tendency to time the stock markets with SEO issuances when the economy is booming. This is consistent with the findings of Bhagat and Black (2002) and Hermalin and Weisbach (2001) who found that firms with a high proportion of independent directors tend to have better corporate governance quality. As independent directors act as intermediaries to balance the authority and benefits between managers, outside investors and other stakeholders (De Andres & Vallelado, 2008), it is likely that the firms with a larger proportion of independent directors on the board abstain from taking advantage of information asymmetry between insiders and outsider investors. Hence, firms with a high proportion of independent directors reduce the probability of stock market timing with the SEO issuance.

Board size

Our empirical result reports that board size negatively impacts the probability of SEO market timing when the economy is booming. Conversely, this factor has a positive effect on the level of equity market timing with multiple SEOs. The negative impact is consistent with Wang (2012) and Upadhyay (2015) who report that there is a positive link between the board size and leverage. The positive impact supports Berger et al. (1997) who claimed that the size of board has a negative effect on leverage. Hence, our findings suggest that firms with larger boards are less likely to time the SEO market timing during economic boom periods but prefer to time the SEO market with multiple SEOs. Therefore, the effect of board size is dependent on the type of strategies for the SEO market timing.

Women on the board

We find that the percentage of women on the board of directors has a negative effect on the level of stock market timing as indicated by the SEO proceeds ratios. This does not support the finding of Alves et al. (2015) who claimed that the diversification of gender on the board of directors has a positive impact on the raising on external equity. However, our finding is similar to that documented by Faccio et al. (2016) that female executives are more conservative than male executives. This implies that even if female directors prefer to use equity financing, they attempt to avoid equity market timing. This strategy may lead to high risks as it may signal bad news to the investors adversely impacting their performance in the future based on signaling theory (Loughran & Ritter, 1995). Thus, female directors on the board act as monitors to prevent firms from using this strategy. In addition to our findings, Elitzur and Solodoha (2021) provide

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evidence on how gender diversity among shareholders can influence decision-making in crowdfunding platforms, which parallels the influence of diverse ownership structures in SEOs.

CEO duality

This study reveals evidence that firms with dual CEOs tend to have a smaller probability of SEO market timing during economic boom periods. This is consistent with the claim of Abor (2007) and Bokpin and Arko (2009) that debt financing is preferred as a new financing source by firms with CEO duality. Nevertheless, there is no paper studying this issue in the extant literature. Consequently, this study is the first study to find that firms with CEO duality avoid timing the equity market as they may attempt to maintain their voting rights and avoid their wealth being diluted by new shareholders (Stulz, 1988). Hence, they prefer financing with debt financing and avoid SEO market timing, even when the economy is booming.

As a result, our findings explore that ownership structure and board structure have a crucial effect on SEO market timing. This is broadly in line with the work of Solodoha et al. (2023) who highlight the critical role of incentivizing investors to engage with startups, a finding that aligns with our results on the significance of board and ownership structures in SEOs. However, we should note that other factors may relate to SEO market timing. For example, the resilience of entrepreneurs, as evidenced by Harel et al. (2022), underscores the potential long-term impacts of strategic market timing on firm success. Moreover, the importance of ethical marketing practices as highlighted by Friedmann et al. (2024), which can be extended to corporate governance to ensure that market timing strategies do not exploit information asymmetries to the detriment of shareholders. Effective communication with investors, as highlighted by Solodoha and Blaywais (2023), is crucial for maintaining investor trust and can influence the success of market timing strategies. Also, the importance of matching processes between entrepreneurs and investors as discussed in Solodoha (2022), which can enhance the efficiency and outcomes of market timing strategies.

7. Conclusion

We investigate the presence of equity market timing and the effect of equity overpricing, ownership and board structure on the probability and level of equity market timing. A sample of 1,747 SEO issuances in the Stock Exchange of Thailand from 2000 to 2020 are used to examine this issue.

Based on our results, we find that firms to time the equity market with SEO issuances in Thailand only during hot markets rather than during an economic boom periods or bullish stock markets. Moreover, timing firms in hot markets tend to keep the SEO proceeds as cash and short-term investments, which implies that one of the motivations of conducting the SEO allocations to take advantage of a window of opportunity. However, the firms involved are not

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successful in earning higher proceeds than the firms issuing in cold markets, on average. Moreover, on average, they do not prefer to issue multiple SEOs.

In addition, this study reveals evidence that equity overpricing has an effect on equity market timing with SEO issuances which is consistent with a lack of market efficiency and insiders and outsiders having different levels of knowledge and/or rationality. Yet, the nature of the effect depends on whether the DCF, RIM, Tobin's q ratio or abnormal stock returns approaches are used as the method of stock valuation and the strategy of equity market timing. We find that when the stock value of firms is overvalued using the DCF method, firms prefer to time the SEO market during hot periods but they tend to earn lower proceeds. On the other hand, when firms use the RIM, Tobin's q ratio and abnormal stock returns methods to estimate their stock value and recognize equity overpricing, they have high incentives to time the equity market with the multiple SEOs and obtain high proceeds.

Our paper also finds that firms with higher foreign ownership tend to time the equity market with multiple SEO issuances. Similarly, firms with higher ownership concentration have high incentive to time the SEO market to earn higher proceeds. However, they avoid timing the SEO market in hot markets and with multiple SEOs.

Further, we obtain evidence that firms with more board independence, larger boards and the dual role of CEOs avoid timing the SEO market when the economy is booming. Likewise, firms with more female directors on the board also avoid SEO market timing during hot periods. On the other hand, companies with larger board prefer to time the equity markets by conducting multiple SEOs.

In summary, this study finds significant evidence that firms have an incentive to time equity market during hot periods but they cannot gain high proceeds. Moreover, equity overpricing has an important influence on SEO market timing and the decision depends on whether the DCF, RIM, Tobin's q ratio or abnormal stock returns approaches to stock valuation are used. Moreover, this study reveals that ownership and board structures have significant effects on SEO market timing. Thus, we find quite complex relationships mediating equity market timing which would be interesting to investigate further in future research.

In addition, this study provides some guidance for stakeholders including managers and investors about decision making about firms' financing policy in the context of stock market timing with SEO issuance. As this study is related to the specific mechanisms of stock ownership and board structures in Thailand, such as, concentrated ownership, family control and low investor protection this may limit the generalizability of our findings to other markets. Although, many emerging markets have somewhat similar properties to Thailand in some respects, we suggest it would be prudent to conduct further research to examine other stock markets to check the robustness and generality of our findings.

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References

Abor, J. (2007). Corporate governance and financing decisions of Ghanaian listed firms. *Corporate Governance: The International Journal of Business in Society*, *7*(1), 83-92.

Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, *94*(2), 291-309.

Ali, H. A. A. (2017). Behavioral timing, valuation and postissue performance of UK initial public offerings. *Journal of Behavioral Finance*, *18*(2), 152-166.

Alti, A. (2006). How persistent is the impact of market timing on capital structure? *Journal of Finance*, *61*(4), 1681-1710.

Alves, P., Couto, E., & Francisco, P. (2015). Board of directors' composition and capital structure. *Reseach in International Business and Finance*, *35*, 1-32.

Andreou, C. K., Lambertides, N., & Panayides, P. M. (2021). Distress risk anomaly and misvaluation. *British Accounting Review, 53*, 100972.

Antoniou, A., Barr, D. G., & Priestley, R. (2000). Abnormal stock returns and public policy: The case of the UK privatised electricity and water utilities. *International Journal of Finance & Economics, 5*, 93-106.

Aumeboonsuke, V. (2012). Weak form efficiency of six equity exchanges in Asean. *European Journal of Scientific Research*, *84*, 532-538.

Asad, F., Gulzar, S., Bangassa, K., & Khan, M. J. (2020). Capital structure adjustment and market reaction following seasoned equity offerings. *International Journal of Finance & Economics, 25*(3), 388-411.

Baker, M. & Wurgler, J. (2002). Market timing and capital structure. *Journal of Finance*, *57*(1), 1-32.

Berger, P. G., Ofek, E., & Yermack, D. L. (1997). Managerial entrenchment and capital structure decisions. *Journal of Finance*, *52*(4), 1411-1438.

Bettman, L. J., Sault, J. S., & Schultz, L. E. (2009). Fundamental and technical analysis: Substitues or complements? *Accounting and Finance, 49*(1), 21-36.

Bhagat, S., & Black, B. S. (2002). The non-correlation between board independence and long-term firm performance. *Journal of Corporation Law*, *27*(2), 231-273.

Blanchard, O., Rhee, C., & Summers, L. (1990). The stock market, profit and investment. *Quarterly Journal of Economics*, *108*(1), 115-136.

Bokpin, G. A., & Arko, A. C. (2009). Ownership structure, corporate governance and capital structure decisions of firms: Empirical evidence from Ghana. *Studies in Economics and Finance*, *26*(4), 246-256.

Byrnes, J. P., Miller, D. C., & Schafer, W.D. (1999). Gender differences in risk taking: a meta-analysis. *Psychological Bulletin 125*, 367-383.

Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity, and firm value. *Financial Review*, *38*(1), 33-53.

Çelik, S., & Akarim, Y. D. (2012). Does market timing drive capital structure? Empirical evidence from an emerging market. *International Journal of Economics and Financial Issues*, *3*(1), 140-152.

Céspedes, J., González, M., & Molina, C. A. (2010). Ownership and capital structure in Latin America. *Journal of Business Research*, *63*(3), 248-254.

Chang, X., Chen, Z., & Hilary, G. (2008). *Market timing and the cost of equity*. Working paper. http://sfm.finance.nsysu.edu.tw/pdf/pastawardpapers/2008-02.pdf

Chen, D.-H., Chen, C.-D., Chen, J., & Huang, Y.-F. (2013). Panel data analyses of the pecking order theory and the market timing theory of capital structure in Taiwan. *International Review of Economics & Finance*, *27*, 1-13.

Claessens, S., & Fan, J. P. (2002). Corporate governance in Asia: A survey. *International Review of Finance*, *3*(2), 71-103.

Cook, D. O., & Tang, T. (2010). Macroeconomic conditions and capital structure adjustment speed. *Journal of Corporate Finance*, *16*(1), 73-87.

Copeland, T., Koller, T., & Murrin, J. (1990). *Valuation: Measuring and managing the value of companies*. John Wiley & Sons Co. NewYork.

Dahlquist, M., & Robertsson, G. (2001). Direct foreign ownership, institutional investors, and firm characteristics. *Journal of Financial Economics*, *59*(3), 413-440.

Damodaran, A. (1999). *The dark side of valuation: firms with no earnings, no history and no comparables*. SSRN Working Paper. https://ssrn.com/abstract=1297075

Dasilas, A., & Leventis, S. (2013). Corporate governance, dividend status, ownership structure, and the performance of Greek seasoned equity offerings. *International Journal of the Economics of Business, 20*(3), 387-419.

De Andres, P., & Vallelado, E. (2008). Corporate governance in banking: The role of the board of directors. *Journal of Banking & Finance*, *32*(12), 2570-2580.

De Cesari, A., Espenlaub, S., Khurshed, A., & Simkovic, M. (2012). The effects of ownership and stock liquidity on the timing of repurchase transactions. *Journal of Corporate Finance*, *18*(5), 1023-1050.

DeAngelo, H., DeAngelo, L., & Stulz, R. M. (2010). Seasoned equity offerings, market timing, and the corporate lifecycle. *Journal of Financial Economics*, *95*(3), 275-295.

Deesomsak, R., Paudyal, K., & Pescetto, G. (2004). The determinants of capital structure: evidence from the Asia Pacific region. *Journal of Multinational Financial Management*, *14*(4), 387-405.
Dimic, N., Orlov, V., & Äijö, J., (2019). Bond–equity yield ratio market timing in emerging markets. *Journal of Emerging Market Finance*, *18*(1), 52-79.
Dittmar, A., & Field, L. C. (2015). Can managers time the market? Evidence using repurchase price data. *Journal of Financial Economics*, *115*(2), 261-282.
Eden, L., Indro, D. C., Miller, S. R., & Richards, M. (2021). Valuation uncertainty, home and host market uncertainty, and cross-border seasoned equity offerings. *International Business Review*, *30*(3), 101808.
Ekkayokkaya, M., & Pengniti, T. (2012). Governance reform and IPO underpricing. *Journal of Corporate Finance*, *18*(2), 238-253.
Elitzur, R., & Solodoha, E. (2021). Does gender matter? Evidence from crowdfunding. *Journal of Business Venturing Insights*, *16*, e00268.
Elliott, W. B., Koëter-Kant, J., & Warr, R. S. (2007). A valuation-based test of market timing. *Journal of Corporate Finance*, *13*(1), 112-128.
Elliott, W. B., Koëter-Kant, J., & Warr, R. S. (2008). Market timing and the debt–equity choice. *Journal of Financial Intermediation*, *17*(2), 175-197.
Faccio, M., Marchica, M.-T., & Mura, R. (2016). CEO gender, corporate risk-taking, and the efficiency of capital allocation. *Journal of Corporate Finance*, *39*, 193-209.
Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics, 26*(2), 301-325.
Fairchild, R., Guney, Y., & Thanatawee, Y., (2014). Corporate dividend policy in Thailand: theory and evidence. *International Review of Financial Analysis*, *31*, 129-151.
Ferreira, M., & Laux, P. (2016). Corporate boards and SEOs: The effect of certification and mornitoring. *Journal of Financial and Quantitative Analysis, 51*(3), 899-927.
Friedmann, E., Weiss-Sidi, M., & Solodoha, E. (2024). Unveiling impact dynamics: Discriminatory brand advertisements, stress response, and the call for ethical marketing practices. *Journal of Retailing and Consumer Services, 79*, 103851.
Fung, S. Y., Su, L. N., & Zhu, X. K. (2010). Price divergence from fundamental value and the value relevenance of accounting information. *Contemporary Accounting Research, 27*(3), 829-854.
Garcia, C. J., & Herrero, B. (2021). Female directors, capital structure, and financial distress. *Journal of Business Research, 136*, 592-601.
Gil-Bazo, J., & Ruiz-Verdu, P. (2009). The relation between price and performance in the mutual fund industry. *Journal of Finance*, *64*(5), 2153-2183.
Gillan, S. L., & Starks, L. T. (2000). Corporate governance proposals and shareholder activism: The role of institutional investors. *Journal of Financial Economics*, *57*(2), 275-305.
Gilson, S. C., Hotchkiss, E. S., & Ruback, R. S. (2000). Valuation of bankrupt firms. *Review of Financial Studies*, *13*(1), 43-74.
Goergen, M., & Renneboog, L. (2001). Investment policy, internal financing and ownership concentration in the UK. *Journal of Corporate Finance*, *7*(3), 257-284.
Gounopoulos, D., Guney, Y., & Xu, T. (2014). *Conducting an IPO with an SEO in mind: Evidence from China*. SSRN Working Paper.
Harel, S., Solodoha, E., & Rosenzweig, S. (2022). Can entrepreneurs who experienced business closure bring their new start-up to a successful M&A? *Journal of Risk and Financial Management, 15*(9), 386.
Hay, D. A., & Morris, D. J. (1979). *Industrial economics and organization: theory and evidence*. Oxford: Oxford University Press.
Hearn, B., Piesse, J., & Strange, R. (2010). Market liquidity and stock size premia in emerging financial markets: The implications for foreign investment. *International Business Review*, *19*(5), 489-501.
Hermalin, B. E., & Weisbach, M. S. (2001) *Boards of directors as an endogenously determined institution: A survey of the economic literature.* SSRN Working Paper. https://ssrn.com/abstract=794804
Hovakimian, A. (2006). Are observed capital structures determined by equity market timing? *Journal of Financial and Quantitative Analysis*, *41*(1), 221-243.
Hovakimian, A., & Hu, H., (2016). Institutional shareholders and SEO market timing. *Journal of Corporate Finance*, *36*, 1-14.
Huang, R., & Ritter, J. R. (2009). Testing theories of capital structure and estimating the speed of adjustment. *Journal of Financial and Quantitative Analysis*, *44*(02), 237-271.
Hwang, L-S., & Lee, W.J. (2013). Stock return predictability of residual-income-based valuation: risk or mispricing? *Abacus, 49*(2), 219-241.
Jarallah, S., Saleh, A. S., & Salim, R. (2018). Examining pecking order versus trade-off theories of capital structure: New evidence from Japanese firms. *International Journal of Finance & Economics, 24*, 204-211.
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.

International Journal of Managerial Finance

Kang, J.-K. (1997). Why is there a home bias? An analysis of foreign portfolio equity ownership in Japan. *Journal of Financial Economics*, *46*(1), 3-28.
Kaplan, S. N., & Ruback, R. S. (1995). The valuation of cash flow forecasts: An empirical analysis. *Journal of Finance*, *50*(4), 1059-1093.
Kaya, H. D. (2013). The long run Impact of IPO market timing on capital structure. *Investment Management and Financial Innovations*, *10*(1), 146-154.
Kayhan, A., & Titman, S. (2007). Firms' histories and their capital structures. *Journal of Financial Economics*, *83*(1), 1-32.
Kim, J. H., & Shamsuddin, A. (2008). Are Asian stock markets efficient? Evidence from new multiple variance ratio tests. *Journal of Empirical Finance*, *15*(3), 518-532.
Kim, W., & Weisbach, M. S. (2008). Motivations for public equity offers: An international perspective. *Journal of Financial Economics*, *87*(2), 281-307.
Korajczyk, R. A., & Levy, A. (2003). Capital structure choice: macroeconomic conditions and financial constraints. *Journal of Financial Economics*, *68*(1), 75-109.
Korajczyk, R. A., Lucas, D. J., & McDonald, R. L. (1991). The effect of information releases on the pricing and timing of equity issues. *Review of Financial Studies*, *4*(4), 685-708.
Kumpamool, C. (2018). *Equity and debt market timing, cost of capital and value and performance: evidence from listed firms in Thailand* [Doctoral thesis, The University of Hull].
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2000). Agency problems and dividend policies around the world. *Journal of Finance*, *55*(1), 1-33.
Larrain, B., & Urzúa, F. (2013). Controlling shareholders and market timing in share issuance. *Journal of Financial Economics*, *109*(3), 661-681.
Lee, C., Myers, J., & Swaminathan, B. (1999). What is the intrinsic value of the Dow? *Journal of Finance*, *54*(5), 1693-1741.
Lee, Y., Su, S.-C., & Lin, W.-C. (2012). Capital structure timing in markets with different characteristics. *International Journal of Business and Finance Research*, *6*(3), 53-66.
Lerskullawat, P. (2011). *Seasoned equity offerings in an emerging market: Evidence from Thailand* [Doctoral thesis, The University of Birmingham].
Li, K., Yue, H., & Zhao, L. (2009). Ownership, institutions, and capital structure: Evidence from China. *Journal of Comparative Economics*, *37*(3), 471-490.
Lim, S., Matolcsy, Z., & Chow, D. (2007). The association between board composition and different types of voluntary disclosure. *European Accounting Review*, *16*(3), 555-583.
Limpaphayom, P., & Ngamwutikul, A. (2004). Ownership structure and post-issue operating performance of firms conducting seasoned equity offerings in Thailand. *Journal of Economics and Finance*, *28*(3), 307-332.
Loughran, T., & Ritter, J. R. (1995). The new issues puzzle. *Journal of Finance*, *50*(1), 23-51.
Loughran, T., & Ritter, J. R. (1997). The operating performance of firms conducting seasoned equity offerings. *Journal of Finance*, *52*(5), 1823-1850.
Lundholm, R., & O'Keefe, T. (2001). Reconciling value estimates from the discounted cash flow model and the residual income model. *Contemporary Accounting Research*, *18*(2), 311-335.
Luu, T. Q., Trang, V. T., & Trinh, N. T. T. (2022). Market timing of CEOs and foreign investors' reaction. *World Journal of Advanced Research and Reviews, 13*(02), 492–500.
Mande, V., Park, Y. K., & Son, M. (2012). Equity or debt financing: Does good corporate governance matter? *Corporate Governance: An International Review, 20*(2), 195-211.
Margaritis, D., & Psillaki, M. (2010). Capital structure, equity ownership and firm performance. *Journal of Banking & Finance*, *34*(3), 621-632.
Masulis, R. W., & Korwar, A. N. (1986). Seasoned equity offerings: An empirical investigation. Journal of Financial Economics, 15(1-2), 91-118.
McGuinness, P. B. (2021). Board member age, stock seasoning and the evolution of capital structure in Chinese firms. *International Business Review*, *30*(3), 101769.
Mehran, H. (1992). Executive incentive plans, corporate control, and capital structure. *Journal of Financial and Quantitative Analysis*, *27*(04), 539-560.
Nam, S-W. and Nam I. C. (2004). Corporate governance in Asia: Recent evidence from Indonesia, Republic of Korea, Malaysia, and Thailand. *Asian Development Bank Institute.*
Pandey, N., Kumar, S., Post, C., Goodell, J. W., & García-Ramos, R. (2023). Board gender diversity and firm performance: A complexity theory perspective. *Asia Pacific Journal of Management*, *40*(3), 1289-1320.
Penman, S. H. (1992). Return to fundamentals. *Journal of Accounting, Auditing & Finance, 7*(4),465-482.
Penman, S. H. (2001). On comparing cash flow and accrual accounting models for use in equity valuation: A response to Lundholm and O'Keefe (CAR, Summer 2001). *Contemporary Accounting Research*, *18*(4), 681-692.
Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. Harper and Row
Plotnicki, M., & Szyszka, A. (2014). IPO market timing. The evidence of the disposition effect among corporate managers. *Global Finance Journal*, *25*(1), 48-55.

International Journal of Managerial Finance

Puwanwnthiren, P., Dang, M., Jenry, D., Puwanwnthiren, P., & Mamun, M. A. (2019). Does managerial ability matter for the choice of seasoned equity offers? *North American Journal of Economics and Finance, 47*, 442-460.
Ragab, A. A., & Omran, M. M. (2006). Accounting information, value relevance, and investors' behavior in the Egyptian equity market. *Review of Accounting and Finance, 5*(3), 279-297.
Sawichi, J. (2009). Corporate governance and dividend policy in Southeast Asia pre- and post-crisis. *The European Journal of Finance, 15*(2), 211-230.
Skogsvik, S., & Skogsvik, K. (2010). Accounting-based probabilistic prediction of ROE, the residual income valuation model and the assessment of mispricing in the Swedish stock market. *Abacus, 46*(4), 387-418.
Soesastro, H. (2000). Governance and the crisis in Indonesia. P. Drysdale (1st Ed.), *Reform and recovery in East Asia* (p. 25). Routledge.
Solodoha E.(2022). Improving the matching process between entrepreneurs and investors. *Annals of Social Sciences & Management Studies, 7*(5), 1-2.
Solodoha, E., & Blaywais, R. (2023). Do updates matter? A comparison between rewards-based and donation-based crowdfunding platforms. *Journal of General Management*.
Solodoha, E., Rosenzweig, S., & Harel, S. (2023). Incentivizing angels to invest in start-ups: Evidence from a natural experiment. *Research Policy, 52*(1), 104634.
Song, K. (2009). Does debt market timing increase firm value? *Applied Economics*, *41*(20), 2605-2617.
Spiess, D. K., & Pettway, R. H. (1997). The IPO and first seasoned equity sale: Issue proceeds, owner/managers' wealth, and the underpricing signal. *Journal of Banking & Finance*, *21*(7), 967-988.
Stiglitz, J. E. (1999). Reforming the global financial architecture: Lessons from recent crises. *Journal of Finance, 54*(4), 1508-1521.
Stowe, J. D., Robinson, T. R., Pinto, J. E., & McLeavey, D. W. (2007). E*quity asset valuation, 4, 2nd edition*. Hoboken, New Jersey: John Wiley & Sons.
Stulz, R. (1988). Managerial control of voting rights: Financing policies and the market for corporate control. *Journal of Financial Economics*, *20*, 25-54.
Stulz, R. M. (1999). Globalization, corporate finance, and the cost of capital. *Journal of Applied Corporate Finance*, *12*(3), 8-25.
Syriopoulos, T., & Tsatsaronis, M. (2012). Corporate governance mechanisms and financial performance: CEO duality in shipping firms. *Eurasian Business Review, 2*(1) 1-30.
Thanatawee, Y. (2013). Ownership structure and dividend policy: Evidence from Thailand. *International Journal of Economics and Finance*, *5*(1), 121-132.
Thanatawee, Y. (2021). The impact of foreign ownership on stock price volatility: Evidence from Thailand. *Journal of Asian Finance, Economics and Business, 8*(1), 007-014.
Thuy, H. X., Khuong, N. V., Anh, L. H. T., & Quyen, N. (2024). Effect of coporate governance on corporate social responsibility in Vietnam: State-ownership as the moderating role. *Journal of Financial Reporting and Accounting, 22*(2), 701-727.
Upadhyay, A. (2015). Board size, firm risk, and equity discount. *Journal of Risk and Insurance*, *82*(3), 571-599.
Venkatesh, S., & Neupane, S. (2005). *Does ownership structure effect IPO underpricing: Evidence from Thai IPOs.* Asian Institute of Technology, Bangkok.
Verheul, I., & Thurik, R. (2001). Start-up capital:" does gender matter?". *Small Business Economics*, *16*(4), 329-346.
Wafi, A. S., Hassan, H., & Mabrouk, A. (2015). Fundamental analysis models in financial markes-review study. *Procedia Economics and Finance, 30*, 939-947.
Wang, Y., Ma, J., & Wang, T. (2023). Do all female directors have the same impact on corporate social responsibility? The role of their political connection. *Asia Pacific Journal of Management*, *40*,1047-1074.
Wang, C. J. (2012). Board size and firm risk-taking. *Review of Quantitative Finance and Accounting*, *38*(4), 519-542.
Warr, R. S., Elliott, W. B., Koëter-Kant, J., & Öztekin, Ö. (2012). Equity mispricing and leverage adjustment costs. *Journal of Financial and Quantitative Analysis*, *47*(03), 589-616.
Wiwattanakantang, Y. (1999). An empirical study on the determinants of the capital structure of Thai firms. *Pacific-Basin Finance Journal*, *7*(3), 371-403.
White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica: Journal of the Econometric Society*, *8*(10), 817-838.
Yoshinaga, Y. (2022). *The investment usefulness of the value relevance model: International evidence.* SSRN Working Paper. https://ssrn.com/abstract=3702199.
Zhao, X., & Tang, M., 2023. CEO age and entry timing within industry merger waves: Evidence from China. *Asia Pacific Journal of Management*, *40*, 517-552.
Zheng, L. (2021). Anticipating the value of share repurchase announcements: the role of short sellers. *International Journal of Finance & Economics, 26*, 3544-3555.
Zhu, Z., Sun, L., Yung, K., & Chen, M. (2020). Limited investor attention, relative fundamental strength, and the cross-section of stock returns. *British Accounting Review, 52*, 100859.

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Table 1.

Definition of dependent, explanatory and control variables.

This table shows the definition of dependent, explanatory and control variables for the SEO market timings models. The dependent variables measure the presence of equity market timing estimated by hot equity market (*Hot_E*), economic boom (*Boom*) and bullish stock market (*Bullish*) and the level of equity market timing calculated by the equity proceed ratio (*PA/TA)* and the number of stock issuance (*DG*). The explanatory variables consist of equity overpricing *(OVP),* Tobin's q ratio (*Tobinq),* abnormal stock returns (*ASR),* foreign ownership (*FROWN),* ownership concentration (*HHI3),* independent board members (*IBO),* board size (*BOZ),* women on board (*WBO)* and CEO duality (*CEOD).* The control variables are profitability *(Profit)*, firm size *(Size),* asset tangibility *(Tang),* dividends *(Div/E)*, cash *(CASH/A),* private placement *(PP)*, and nominal GDP growth rate *(NG).*

Variable	Notation	Definition
Hot equity	*Hot_E*	The dummy variable which captures the equity market timing during a hot equity market = 1 if a firm issue equity in hot market and 0 if a firm issues equity in cold market.
Economic boom	*Boom*	The dummy variable which captures the equity market timing during an economic boom period = 1 if a firm issues equity in the period of economic expansion and 0 if a firm issues equity in economic depression.
Bullish stock market	*Bullish*	The dummy variable which captures the equity market timing during a bullish stock market = 1 if a firm issues equity in the bullish stock market & 0 if in the bearish stock market.
Proceeds of equity	*PA/TA*	The amount of capital that is raised during equity issuance divided by year –end assets at time t.
Number of stock issuance	*DG*	Log of the number of stock issuance per year which the firms issue stock.
Equity overpricing	*OVP*	The dummy variable which captures the overvaluation of stock = 1 if a firm has the V/P <1; otherwise = 0. where, V/P is the equity's intrinsic value divided by the market stock price at t-1. t is the year of SEO issuance.
Tobin's q ratio	*Tobinq*	The dummy variable which captures the overvaluation of stock = 1 if a firm has the Tobin's q ratio > 1; otherwise = 0. The Tobin's q ratio is estimated by the book value of assets less the book value of equity plus the market value of equity divided by the book value of assets.
Abnormal stock returns	*ASR*	The dummy variable which captures the overvaluation of stock = 1 if a firm has the abnormal stock returns > 0; otherwise = 0. The abnormal stock returns are estimated by return on the stock less expected rate of return on the stock.
Foreign ownership	*FROWN*	The proportion of stocks held by foreign investors.
Ownership concentration	*HHI3*	The index of three largest shareholders. HHI = $\sum_{i=1}^{n} s_i^2$; S_i = proportion of equity held by the i^{th} shareholder.
Independent board members	*IBO*	The percentage of independent board members.
Board size	*BOZ*	Log of the total number of board members at the end of the fiscal year.
Women on board	*WBO*	The percentage of women on the board of directors.
CEO duality	*CEOD*	The dummy variable which captures the CEO duality = 1 if a CEO has 2 positions both CEO and chairman of board of directors and = 0, otherwise.
Profitability	*Profit*	Earnings before interest, taxes and depreciation over total assets.
Firm size	*Size*	Logarithm of net sales adjusted for inflation.
Asset tangibility	*Tang*	Net plant, property & equipment over total assets.
Dividends	*Div/E*	Common dividends over book value of equity.
Cash	*C/A*	Current and short-term investment divided by total assets.
Private placement	*PP*	The dummy variable which captures the types of SEO allocation = 1, if SEO is issued with private placement method = 0 if SEO is issued with other methods.
Nominal GDP growth rate	*NG*	Real GDP growth rate plus inflation rate.

Table 2.

Summary statistics.

This table describes the descriptive statistics of the effect of equity overpricing, ownership and board structure on the SEO market timing. There are 1,747 SEO issuances in the stock market of Thailand during the period from 2000 to 2020. The dependent variables measure the presence of equity market timing estimated by hot equity market (*Hot_E*), economic boom (*Boom*) and bullish stock market (*Bullish*) and the level of equity market timing calculated by the equity proceed ratio (*PA/TA)* and the number of stock issuance (*DG*). The explanatory variables consist of equity overpricing *(OVP),* Tobin's q ratio ($Tobinq_{t-1}$), abnormal stock returns (ASR_{t-1}), foreign ownership (*FROWN),* ownership concentration (*HHI3),* independent board members (*IBO),* board size (*BOZ),* women on board (*WBO)* and CEO duality (*CEOD).* The controls are profitability *(Profit)*, firm size *(Size),* asset tangibility *(Tang),* dividends *(Div/E)*, cash *(CASH/A),* private placement *(PP)* and nominal GDP growth rate *(NG).*

Variable	Number of observations	Mean	Standard deviation	Minimum	Maximum
Hot_E	1,747	0.6640	0.4725	0.0000	1.0000
Boom	1,747	0.4551	0.4981	0.0000	1.0000
Bullish	1,747	0.4362	0.4961	0.0000	1.0000
PA/TA	1,747	0.0919	0.1498	0.0018	0.8754
DG	1,747	2.9943	3.7381	1.0000	35.0000
$OVP(DCF)_{t-1}$	1,747	0.5243	0.4996	0.0000	1.0000
$OVP(RI)_{t-1}$	1,747	0.7115	0.4532	0.0000	1.0000
$Tobinq_{t-1}$	1,747	0.7825	0.4127	0.0000	1.0000
ASR_{t-1}	1,747	0.4906	0.5001	0.0000	1.0000
$FROWN_{t-1}$	1,747	0.1218	0.1427	0.0000	0.4900
$HHI3_{t-1}$	1,747	0.1257	0.1272	0.0000	0.8637
IBO_{t-1}	1,747	0.3881	0.1035	0.1111	0.7143
BOZ_{t-1}	1,747	9.9078	2.5726	5.0000	21.0000
WBO_{t-1}	1,747	0.1652	0.1423	0.0000	0.7000
$CEOD_{t-1}$	1,747	0.1586	0.3654	0.0000	1.0000
$Profit_{t-1}$	1,747	0.0816	0.1375	-0.4485	0.4163
$Size_{t-1}$	1,747	6.1652	0.7322	3.7606	8.8504
$Tang_{t-1}$	1,747	0.3494	0.2440	0.0074	0.8845
Div/E_{t-1}	1,747	0.0468	0.0738	0.0000	0.5925
C/A_{t-1}	1,747	0.1024	0.1064	0.0051	0.5316
PP_{t-1}	1,747	0.1906	0.3929	0.0000	1.0000
NG_{t-1}	1,747	0.0539	0.0402	-0.0613	0.1117

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Table 3.
Correlation matrix.
This table shows correlation matrix for all variables used in this study. The dependent variables measure the presence of equity market timing estimated by hot equity market (*Hot_E*), economic boom (*Boom*) and bullish stock market (*Bullish*) and the level of equity market timing calculated by the equity proceed ratio (*PA/TA*) and the number of stock issuance (*DG*). The explanatory variables consist of equity overpricing *(OVP),* Tobin's q ratio ($Tobinq_{t-1}$), abnormal stock returns (ASR_{t-1}), foreign ownership (*FROWN),* ownership concentration (*HHI3),* independent board members (*IBO),* board size (*BOZ),* women on board (*WBO)* and CEO duality (*CEOD).* The control variables are profitability *(Profit)*, firm size *(Size),* asset tangibility *(Tang),* dividends *(Div/E)*, cash *(CASH/A),* private placement *(PP)* and nominal GDP growth rate *(NG).* ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Hot_E	***Boom***	***Bullish***	***PA/TA***	***DG***	***OVP(DCF)$_{t-1}$***	***OVP(RI)$_{t-1}$***	***Tobinq$_{t-1}$***	***ASR$_{t-1}$***	***FROWN$_{t-1}$***	***HHI3$_{t-1}$***
Boom	0.0173										
Bullish	-0.0854***	0.0747***									
PA/TA	-0.0548**	0.0459*	-0.0101								
DG	-0.0209	-0.0165	0.0211	0.0522**							
OVP(DCF)$_{t-1}$	0.0844***	0.0165	-0.0128	-0.1721***	-0.0279						
OVP(RI)$_{t-1}$	0.0017	0.0237	0.0098	0.1108***	0.0922***	0.0184					
Tobinq$_{t-1}$	0.0244	0.0193	0.0021	0.0500**	0.0096	0.0757***	0.2584***				
ASR$_{t-1}$	0.0460*	-0.0046	-0.0134	-0.0861***	0.0780***	0.0657***	0.1169***	0.0900***			
FROWN$_{t-1}$	0.0144	-0.0166	0.0205	-0.0673***	0.1727***	0.006	0.0886***	-0.0604**	0.0295		
HHI3$_{t-1}$	-0.0424*	-0.0016	0.0387	-0.0214	-0.0166	-0.0253	0.0545**	0.1154***	-0.0183	0.033	
IBO$_{t-1}$	-0.012	-0.0305	-0.0492**	-0.0111	-0.0358	0.0395*	-0.0442*	0.0647***	-0.0496**	-0.1271***	0.0812***
BOZ$_{t-1}$	0.0199	-0.0515**	0.0236	-0.1499***	0.1244***	0.0131	-0.0442*	-0.1015***	0.0806***	0.1970***	-0.0276
WBO$_{t-1}$	0.0284	0.0176	0.0114	-0.0305	-0.0553**	0.0285	-0.0458*	-0.0515**	0.0068	-0.2071***	-0.0084
CEOD$_{t-1}$	-0.0031	-0.0411*	-0.0184	0.0153	0.02	0.0149	0.0308	-0.037	-0.0216	0.0242	-0.0692***
PP$_{t-1}$	-0.1145***	0.0804***	0.0022	0.2298***	-0.0239	-0.0805***	0.0099	0.0263	-0.0477**	0.0267	-0.0472**
NG$_{t-1}$	-0.0478**	-0.0719***	0.1031***	0.1409***	0.2050***	-0.2129***	0.1653***	-0.0696***	0.0094	0.1323***	-0.0252
Profit$_{t-1}$	0.0449*	-0.0153	0.0093	-0.2501***	0.1133***	0.0567**	0.0509**	-0.0269	0.1684***	0.0936***	0.1265***
Size$_{t-1}$	0.0122	-0.0214	0.0604**	-0.3135**	0.1880***	0.0161	-0.0053	-0.0194	0.0703***	0.3236***	0.1400***
Tang$_{t-1}$	-0.0094	0.0465*	0.0348	-0.0311	0.0286	-0.0324	-0.0082	-0.0498**	-0.0516**	0.0651***	-0.0033
Div/E$_{t-1}$	-0.0169	-0.0098	0.0264	-0.1585***	0.0729***	0.0667***	0.0981***	0.1634***	0.1902***	0.0536**	0.0992***
C/A$_{t-1}$	0.0035	0.0141	-0.0364	0.0425*	-0.0362	0.0466*	0.0917***	0.1045***	0.0447*	-0.0245	0.0641***
	IBO$_{t-1}$	***BOZ$_{t-1}$***	***WBO$_{t-1}$***	***CEOD$_{t-1}$***	***PP$_{t-1}$***	***NG$_{t-1}$***	***Profit$_{t-1}$***	***Size$_{t-1}$***	***Tang$_{t-1}$***	***Div/E$_{t-1}$***	
BOZ$_{t-1}$	-0.3814***										
WBO$_{t-1}$	0.0362	-0.1265***									
CEOD$_{t-1}$	-0.0206	-0.1337***	0.0815***								
PP$_{t-1}$	-0.0356	-0.0414*	-0.0388	-0.0311							
NG$_{t-1}$	-0.1986***	0.1283***	-0.0856***	0.0225	0.0523**						
Profit$_{t-1}$	-0.0727***	0.1705***	0.0518**	-0.0163	-0.1288***	0.0845***					
Size$_{t-1}$	-0.0311	0.3786***	-0.1388***	-0.0470**	-0.1351***	0.1158***	0.2962***				
Tang$_{t-1}$	-0.0960***	0.1184***	-0.0043	-0.0597**	0.0331	0.0667***	0.0758***	0.0447*			
Div/E$_{t-1}$	-0.0069	0.0470**	-0.0614**	-0.0113	-0.1409***	0.0415*	0.4240***	0.1979***	-0.0459*		
C/A$_{t-1}$	0.033	-0.0623***	-0.0136	-0.006	-0.0061	-0.0056	0.0565**	-0.1502***	-0.2498***	0.1725***	

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Table 4.

Mean value difference tests.

This table presents mean value tests comparing the differences between timers and non-timers for SEOs samples. Moreover, *t-test* is reported for the differences in mean values of the variables in terms of unequal variances. PA/TA_t is the SEO proceeds divided by total assets at time t. PA/TA_{t-1} is the SEO proceeds over total assets measured at time t-1. *DG* is the number of SEO issuance. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Variable	Number of Stock Volume		t-value	Economic Growth		t-value	Stock Market Growth		t-value
	Hot	Cold	(difference)	Boom	Bust	(difference)	Bullish	Bearish	(difference)
PA/TA_t	0.0860	0.1034	**(-0.0174**)**	0.0994	0.0856	(0.0138)	0.0902	0.0932	(-0.0030)
N	1,160	587		795	952		762	985	
PA/TA_{t-1}	0.1246	0.1658	**(-0.0412**)**	0.1407	0.1365	(0.0042)	0.1299	0.1451	(0.0152)
N	1,160	587		795	952		762	985	
DG	2.9612	3.0596	**(-0.0984*)**	2.9736	3.0116	(-0.0380)	3.1470	2.8761	(0.2708)
N	1,160	587		795	952		762	985	

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Table 5.

Spending the proceeds after stock issuance.

This table shows the GLS and IV (2SLS) regressions for spending proceeds after stock issuance for SEO samples. The dependent variables are estimated in terms of the asset-based variables consisting of total asset (*TA*), cash (*CASH*), cash plus short-term investment (*C&S*), inventory (*Inv*), and property, plant, and equipment (*PPE*). Year and industry fixed effects are included in all models. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Type	*Y*	*t*	*N*	*PA/TA0*	TA_0	*Constant*	*Wald Chi2*	*Adj* R^2	*Durbin (score)* χ^2 *from IV (2SLS)*	*Wu-Hausman F from IV (2SLS)*	*Sargan (score)* χ^2 *from IV (2SLS)*	*Basmann* χ^2 *from IV (2SLS)*
IV (2SLS)	Δ *TA 1*	1	1158	**0.428***** (3.05)	0.557*** (33.51)	-8.088*** (-17.30)	1480.20***	0.569	5.234**	5.121**	0.000004	0.000004
GLS	Δ *TA 2*	2	1092	**0.792***** (5.29)	0.580*** (33.16)	-8.477*** (-17.20)	1405.10***	-	0.682	0.664	0.111	0.108
IV (2SLS)	Δ *TA 3*	3	960	**0.511***** (2.83)	0.541*** (26.65)	-7.841*** (-14.50)	988.90***	0.513	7.157***	7.008***	0.014	0.014
IV (2SLS)	Δ *TA 4*	4	815	0.310 (1.45)	0.530*** (22.85)	-7.605*** (-12.98)	766.00***	0.487	3.969**	3.866**	0.297	0.288
GLS	Δ *Cash1*	1	1158	**0.241***** (6.19)	0.0861*** (19.16)	-1.276*** (-9.88)	527.10***	-	1.167	1.137	2.078	2.027
GLS	Δ *Cash 2*	2	1092	**0.442***** (6.89)	0.214*** (28.54)	-3.310*** (-15.66)	1031.00***	-	1.001	0.975	3.192**	3.116*
GLS	Δ *Cash 3*	3	960	**0.369***** (5.06)	0.225*** (28.10)	-3.449*** (-15.89)	974.70***	-	0.002	0.002	0.215	0.209
GLS	Δ *Cash 4*	4	815	**0.319***** (3.81)	0.215*** (24.22)	-3.221*** (-14.14)	788.30***	-	2.226	2.164	0.692	0.671
GLS	Δ *C&S 1*	1	1158	**0.531***** (7.66)	0.259*** (32.49)	-3.804*** (-16.56)	1366.90***	-	0.354	0.344	63.091***	64.941***
GLS	Δ *C&S 2*	2	1092	**0.478***** (6.42)	0.256*** (29.37)	-3.806*** (-15.52)	1106.60***	-	2.438	2.378	4.353**	4.255**
GLS	Δ *C&S 3*	3	960	**0.384***** (4.55)	0.256*** (27.67)	-3.761*** (-14.98)	992.40***	-	0.304	0.295	1.976	1.924
GLS	Δ *C&S 4*	4	815	**0.427***** (4.25)	0.269*** (25.29)	-3.891*** (-14.24)	850.80***	-	0.150	0.145	2.654	2.581
GLS	Δ *Inv 1*	1	1158	**0.435***** (4.37)	0.307*** (26.79)	-4.907*** (-14.88)	1119.40***	-	0.049	0.048	0.143	0.139
GLS	Δ *Inv 2*	2	1092	**0.481***** (4.79)	0.297*** (25.31)	-4.810*** (-14.53)	974.90***	-	0.007	0.007	0.031	0.030
GLS	Δ *Inv 3*	3	960	**0.462***** (3.99)	0.295*** (23.15)	-4.686*** (-13.57)	838.70***	-	1.059	1.031	0.019	0.019
GLS	Δ *Inv 4*	4	815	**0.414***** (3.28)	0.292*** (21.93)	-4.625*** (-13.49)	767.10***	-	0.017	0.017	0.371	0.360

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Table 5 (Continued).

Type	Y	t	N	PA/TA0	TA_0	Constant	Wald Chi2	Adj R^2	Durbin (score) χ^2 from IV (2SLS)	Wu-Hausman F from IV (2SLS)	Sargan (score) χ^2 from IV (2SLS)	Basmann χ^2 from IV (2SLS)
GLS	Δ *PPE 1*	1	1158	**0.805***** (7.76)	0.548*** (45.91)	-8.013*** (-23.32)	2866.90***	-	0.288	0.281	7.607***	7.459***
GLS	Δ *PPE 2*	2	1092	**0.856***** (7.91)	0.555*** (43.90)	-7.890*** (-22.17)	2542.60***	-	0.089	0.087	7.803***	7.650***
GLS	Δ *PPE 3*	3	960	**0.733***** (5.63)	0.551*** (38.57)	-7.769*** (-20.05)	1968.30***	-	0.536	0.521	5.829**	5.700**
GLS	Δ *PPE 4*	4	815	**0.553***** (3.68)	0.551*** (34.64)	-7.725*** (-18.89)	1638.30***	-	0.061	0.059	4.019**	3.915**
GLS	∑*CAPEX 1*	1	1158	0.0189 (0.58)	0.0751*** (20.02)	-1.097*** (-10.16)	614.00***	-	0.609	0.593	0.029	0.028
GLS	∑ *CAPEX 2*	2	1092	**0.188***** (3.26)	0.143*** (21.25)	-1.906*** (-10.02)	636.00***	-	1.939	1.891	3.352*	3.273*
IV (2SLS)	∑ *CAPEX 3*	3	960	**0.224***** (2.76)	0.179*** (19.60)	-2.295*** (-9.45)	568.90***	0.371	3.642*	3.553*	1.938	1.888
GLS	∑ *CAPEX 4*	4	815	**0.226**** (2.19)	0.208*** (19.03)	-2.648*** (-9.43)	535.20***	-	2.383	2.317	1.573	1.528
GLS	∑ *DivP 1*	1	1158	**0.209***** (4.26)	0.139*** (24.67)	-2.151*** (-13.23)	774.80***	-	0.449	0.438	78.553***	82.013***
IV (2SLS)	∑ *DivP 2*	2	1092	**0.287***** (4.22)	0.203*** (24.84)	-3.109*** (-13.81)	773.70***	0.405	3.662*	3.576*	2.028	1.978
GLS	∑ *DivP 3*	3	960	**0.324***** (3.72)	0.247*** (25.83)	-3.767*** (-14.50)	838.20***	-	0.179	0.174	1.910	1.860
GLS	∑ *DivP 4*	4	815	**0.332***** (3.09)	0.279*** (24.48)	-4.034*** (-13.78)	767.60***	-	0.098	0.095	2.705	2.631
IV (2SLS)	∑ *RepLTD 1*	1	1158	**0.424***** (6.19)	0.238*** (29.27)	-3.185*** (-13.94)	1119.50***	0.486	2.824*	2.757*	1.255	1.223
GLS	∑ *RepLTD 2*	2	1092	**0.599***** (7.17)	0.319*** (32.74)	-4.358*** (-15.85)	1349.80***	-	1.200	1.170	0.493	0.481
GLS	∑ *RepLTD 3*	3	960	**0.661***** (6.38)	0.383*** (33.66)	-5.234*** (-16.96)	1429.70***	-	0.960	0.934	0.485	0.471
GLS	∑ *RepLTD 4*	4	815	**0.756***** (6.06)	0.435*** (32.91)	-5.969*** (-17.58)	1375.90***	-	0.259	0.251	0.344	0.334

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Table 6.

The marginal effects of probit regressions for the impact of equity overpricing, ownership and board structure on the presence of SEO market timing.

This table presents the marginal effect of probit regressions for the effect of equity overpricing, ownership and board structure on the presence of SEO market timing. The dependent variables are the presence of equity market timing captured using three definitions; hot equity market (*Hot_E*), economic boom period (*Boom*) and bullish stock market (*Bullish*). The explanatory variables consist of equity overpricing *(OVP),* Tobin's q ratio ($Tobinq_{t-1}$), abnormal stock returns (ASR_{t-1}), foreign ownership (*FROWN),* ownership concentration (*HHI3),* independent board members (*IBO),* board size (*BOZ),* women on board (*WBO)* and CEO duality (*CEOD).* The control variables are profitability *(Profit)*, firm size *(Size),* asset tangibility *(Tang),* dividends *(Div/E)*, cash *(CASH/A),* private placement *(PP)* and nominal GDP growth rate *(NG).* We also control for industry fixed effects. White (1980) standard errors are used to estimate the coefficient's significant level. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Hot_E		***Boom***		***Bullish***	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
$OVP(DCF)_{t-1}$	**0.0601*** **	-	0.0108	-	0.0115	-
	(2.65)	-	(0.44)	-	(0.47)	-
$OVP(RI)_{t-1}$	-	0.0110	-	0.0358	-	-0.00906
	-	(0.43)	-	(1.34)	-	(-0.34)
$FROWN_{t-1}$	0.0878	0.0923	-0.00767	-0.0154	-0.0191	-0.0158
	(1.03)	(1.08)	(-0.08)	(-0.17)	(-0.21)	(-0.17)
$HHI3_{t-1}$	**-0.180****	**-0.193****	-0.0351	-0.0428	0.153	0.152
	(-2.00)	**(-2.14)**	(-0.37)	(-0.45)	(1.60)	(1.59)
IBO_{t-1}	-0.0740	-0.0675	**-0.370*****	**-0.364*****	-0.206	-0.207
	(-0.61)	(-0.56)	**(-2.89)**	**(-2.84)**	(-1.61)	(-1.62)
BOZ_{t-1}	0.0295	0.0398	**-0.389*****	**-0.375*****	-0.101	-0.103
	(0.24)	(0.32)	**(-2.99)**	**(-2.88)**	(-0.77)	(-0.78)
WBO_{t-1}	0.0925	0.0978	0.0448	0.0483	0.101	0.102
	(1.12)	(1.18)	(0.51)	(0.56)	(1.16)	(1.16)
$CEOD_{t-1}$	-0.0216	-0.0210	**-0.0560***	**-0.0566***	-0.0252	-0.0248
	(-0.69)	(-0.67)	**(-1.68)**	**(-1.70)**	(-0.76)	(-0.75)
PP_{t-1}	-0.132***	-0.136***	0.102***	0.101***	0.00754	0.00664
	(-4.74)	(-4.90)	(3.33)	(3.31)	(0.24)	(0.21)
NG_{t-1}	-0.388	-0.581**	-0.970***	-1.063***	1.218***	1.203***
	(-1.33)	(-2.00)	(-3.13)	(-3.48)	(3.90)	(3.89)
$Profit_{t-1}$	0.181*	0.192**	-0.0202	-0.0208	-0.110	-0.108
	(1.91)	(2.02)	(-0.20)	(-0.21)	(-1.09)	(-1.07)
$Size_{t-1}$	-0.00869	-0.00781	0.0257	0.0268	0.0373*	0.0371*
	(-0.46)	(-0.41)	(1.28)	(1.34)	(1.87)	(1.86)
$Tang_{t-1}$	-0.0445	-0.0453	0.0979*	0.0978*	0.0447	0.0446
	(-0.89)	(-0.91)	(1.85)	(1.85)	(0.84)	(0.84)
Div/E_{t-1}	-0.321*	-0.310*	0.0308	0.0191	0.200	0.207
	(-1.92)	(-1.84)	(0.17)	(0.10)	(1.09)	(1.13)
C/A_{t-1}	-0.00198	0.00337	0.120	0.114	-0.138	-0.134
	(-0.02)	(0.03)	(1.01)	(0.96)	(-1.12)	(-1.09)
Industry FE	YES	YES	YES	YES	YES	YES
N	1747	1747	1747	1747	1747	1747
Wald $\chi 2$	60.30***	53.55***	49.15***	50.96***	36.78**	36.70**
Pseudo R^2	0.0271	0.0241	0.0209	0.0216	0.0157	0.0156
Wald test of exogeneity from IV-probit method	0.18	0.11	0.06	0.21	0.51	1.2

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Table 6 (Continued).

	Hot_E		*Boom*		*Bullish*	
	(7)	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**
$Tobinq_{t-1}$	0.0434	-	0.00577	-	0.00863	-
	(1.54)	-	(0.19)	-	(0.29)	-
ASR_{t-1}	-	**0.0403***	-	0.00167	-	-0.0180
	-	**(1.77)**	-	(0.07)	-	(-0.75)
$FROWN_{t-1}$	0.102	0.0931	-0.00574	-0.00672	-0.0166	-0.0175
	(1.20)	(1.09)	(-0.06)	(-0.07)	(-0.18)	(-0.19)
$HHI3_{t-1}$	**-0.203****	**-0.183****	-0.0386	-0.0367	0.149	0.148
	(-2.25)	**(-2.04)**	(-0.41)	(-0.39)	(1.55)	(1.55)
IBO_{t-1}	-0.0689	-0.0645	**-0.369*****	**-0.369*****	-0.205	-0.207
	(-0.57)	(-0.53)	**(-2.88)**	**(-2.88)**	(-1.61)	(-1.62)
BOZ_{t-1}	0.0494	0.0249	**-0.386*****	**-0.388*****	-0.0968	-0.0941
	(0.40)	(0.20)	**(-2.96)**	**(-2.98)**	(-0.74)	(-0.72)
WBO_{t-1}	0.104	0.0961	0.0465	0.0456	0.104	0.104
	(1.26)	(1.17)	(0.53)	(0.52)	(1.18)	(1.18)
$CEOD_{t-1}$	-0.0191	-0.0198	**-0.0556***	**-0.0558***	-0.0246	-0.0254
	(-0.61)	(-0.63)	**(-1.67)**	**(-1.68)**	(-0.74)	(-0.76)
PP_{t-1}	-0.138***	-0.136***	0.101***	0.101***	0.00633	0.00651
	(-4.96)	(-4.89)	(3.30)	(3.31)	(0.20)	(0.21)
NG_{t-1}	-0.541*	-0.552*	-0.996***	-0.999***	1.192***	1.183***
	(-1.88)	(-1.92)	(-3.29)	(-3.31)	(3.91)	(3.88)
$Profit_{t-1}$	0.205**	0.176*	-0.0169	-0.0192	-0.106	-0.101
	(2.15)	(1.85)	(-0.17)	(-0.19)	(-1.05)	(-1.00)
$Size_{t-1}$	-0.00831	-0.00776	0.0258	0.0258	0.0372*	0.0372*
	(-0.44)	(-0.41)	(1.29)	(1.29)	(1.87)	(1.87)
$Tang_{t-1}$	-0.0429	-0.0409	0.0980*	0.0980*	0.0449	0.0424
	(-0.86)	(-0.82)	(1.85)	(1.85)	(0.85)	(0.80)
Div/E_{t-1}	-0.351**	-0.347**	0.0279	0.0323	0.194	0.221
	(-2.06)	(-2.05)	(0.15)	(0.18)	(1.04)	(1.20)
C/A_{t-1}	-0.00107	0.00335	0.121	0.122	-0.138	-0.135
	(-0.01)	(0.03)	(1.02)	(1.02)	(-1.12)	(-1.10)
Industry FE	YES	YES	YES	YES	YES	YES
N	1747	1747	1747	1747	1747	1747
Wald $\chi 2$	55.58***	56.61***	48.91***	48.89***	36.78**	37.30**
Pseudo R^2	0.0251	0.0254	0.0208	0.0208	0.0156	0.0158
Wald test of exogeneity from IV-probit method	0.38	0.21	0.54	1.09	0.59	0.09

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Table 7.

GLS and IV (2SLS) regressions for the effect of equity overpricing, ownership and board structure on the level of SEO market timing.

This table reports the GLS and IV (2SLS) regressions for the impact of equity overpricing, ownership and board structure on the level of timing market with SEOs. The dependent variables are the level of stock market timing captured using two definitions; SEO proceeds divided by total assets at time t (PA/TA_t) and the number of SEO issuances (*DG*). The explanatory variables consist of equity overpricing *(OVP)*, Tobin's q ratio ($Tobinq_{t-1}$), abnormal stock returns (ASR_{t-1}), foreign ownership (*FROWN)*, ownership concentration (*HHI3)*, independent board members (*IBO)*, board size (*BOZ)*, women on board (*WBO)* and CEO duality (*CEOD)*. The control variables are profitability *(Profit)*, firm size *(Size)*, asset tangibility *(Tang)*, dividends *(Div/E)*, cash *(CASH/A)*, private placement *(PP)* and nominal GDP growth rate *(NG)*. We also control for industry fixed effects. ***, ** and * show statistical significance at the 1%, 5% and 10% levels, respectively.

	PA/TA$_t$		***DG***	
	(1)	**(2)**	**(3)**	**(4)**
	GLS	***GLS***	***GLS***	***GLS***
$OVP(DCF)_{t-1}$	**-0.0336*** **		-0.00543	
	(-5.08)		(-0.35)	
$OVP(RI)_{t-1}$		**0.0275*** **		**0.0408** **
		(3.76)		**(2.37)**
$FROWN_{t-1}$	0.00373	-0.00602	**0.228*** **	**0.218*** **
	(0.15)	(-0.24)	**(3.89)**	**(3.71)**
$HHI3_{t-1}$	**0.0453***	**0.0469***	**-0.102***	**-0.108***
	(1.75)	**(1.80)**	**(-1.66)**	**(-1.75)**
IBO_{t-1}	-0.0149	-0.0127	0.122	0.128
	(-0.43)	(-0.36)	(1.49)	(1.57)
BOZ_{t-1}	-0.0535	-0.0481	**0.151***	**0.165***
	(-1.50)	(-1.34)	**(1.79)**	**(1.95)**
WBO_{t-1}	**-0.0431***	**-0.0444***	0.0213	0.0235
	(-1.82)	**(-1.87)**	(0.38)	(0.42)
$CEOD_{t-1}$	0.00175	0.000516	0.0236	0.0226
	(0.19)	(0.06)	(1.11)	(1.06)
PP_{t-1}	0.0583***	0.0608***	-0.00965	-0.00923
	(6.97)	(7.26)	(-0.49)	(-0.47)
NG_{t-1}	0.576***	0.619***	1.386***	1.328***
	(6.81)	(7.38)	(6.92)	(6.72)
$Profit_{t-1}$	-0.154***	-0.161***	0.146**	0.143**
	(-5.67)	(-5.91)	(2.27)	(2.23)
$Size_{t-1}$	-0.0541***	-0.0535***	0.0445***	0.0456***
	(-9.91)	(-9.76)	(3.44)	(3.53)
$Tang_{t-1}$	-0.0183	-0.0179	0.0325	0.0326
	(-1.27)	(-1.24)	(0.96)	(0.96)
Div/E_{t-1}	-0.0692	-0.0904*	0.0899	0.0707
	(-1.40)	(-1.82)	(0.77)	(0.60)
C/A_{t-1}	0.00588	-0.00466	-0.0802	-0.0896
	(0.18)	(-0.14)	(-1.03)	(-1.15)
Constant	0.489***	0.442***	-0.310***	-0.360***
	(10.41)	(9.25)	(-2.79)	(-3.20)
Industry FE	YES	YES	YES	YES
N	1747	1747	1747	1747
Wald $\chi2$	459.60***	445.00***	198.90***	205.00***
Durbin $\chi2$ from IV (2SLS) method	0.0281	0.9817	1.1191	2.6917
Wu-Hausman F from IV (2SLS) method	0.0274	0.9592	1.0935	2.6326
Sargan $\chi2$ from IV (2SLS) method	4.3378**	1.1525	2.2453	0.0419
Basmann $\chi2$ from IV (2SLS) method	4.2466**	1.1262	2.1954	0.0410

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Table 7 (Continued).

	PA/TAt		*DG*	
	(5)	**(6)**	**(7)**	**(8)**
	GLS	***IV (2SLS)***	***GLS***	***GLS***
$Tobinq_{t-1}$	**0.0145***	-	**0.0322***	-
	(1.79)	-	**(1.68)**	-
ASR_{t-1}	-	**0.274***	-	**0.0380****
	-	**(1.72)**	-	**(2.44)**
$FROWN_{t-1}$	0.00283	-0.00777	**0.232*****	**0.226*****
	(0.11)	(-0.22)	**(3.97)**	**(3.87)**
$HHI3_{t-1}$	**0.0473***	**0.0960****	**-0.110***	-0.0947
	(1.80)	**(2.11)**	**(-1.79)**	(-1.55)
IBO_{t-1}	-0.0172	0.0200	0.121	0.127
	(-0.49)	(0.37)	(1.48)	(1.55)
BOZ_{t-1}	-0.0531	**-0.134****	**0.161***	**0.140***
	(-1.47)	**(-1.98)**	**(1.90)**	**(1.66)**
WBO_{t-1}	**-0.0442***	**-0.0604***	0.0251	0.0188
	(-1.85)	**(-1.72)**	(0.45)	(0.34)
$CEOD_{t-1}$	0.00158	0.00772	0.0245	0.0244
	(0.17)	(0.57)	(1.15)	(1.15)
PP_{t-1}	0.0602***	0.0636***	-0.0106	-0.00886
	(7.15)	(5.25)	(-0.54)	(-0.45)
NG_{t-1}	0.676***	0.724***	1.418***	1.409***
	(8.11)	(5.88)	(7.24)	(7.21)
$Profit_{t-1}$	-0.155***	-0.266***	0.154**	0.130**
	(-5.67)	(-3.64)	(2.40)	(2.02)
$Size_{t-1}$	-0.0544***	-0.0528***	0.0442***	0.0447***
	(-9.89)	(-6.68)	(3.43)	(3.46)
$Tang_{t-1}$	-0.0173	0.0137	0.0340	0.0369
	(-1.19)	(0.49)	(1.00)	(1.09)
Div/E_{t-1}	-0.0941*	-0.349**	0.0539	0.0509
	(-1.86)	(-2.02)	(0.45)	(0.43)
C/A_{t-1}	-0.00112	-0.0198	-0.0860	-0.0838
	(-0.03)	(-0.41)	(-1.11)	(-1.08)
Constant	0.458***	0.391***	-0.346***	-0.324***
	(9.55)	(4.72)	(-3.08)	(-2.93)
Industry FE	YES	YES	YES	YES
N	1747	1747	1747	1747
Wald $\chi2$	431.40***	212.70***	201.90***	205.40***
RMSE	-	0.192	-	-
Durbin $\chi2$ from IV (2SLS) method	1.5952	6.4382**	0.6540	0.0397
Wu-Hausman F from IV (2SLS) method	1.5765	6.3807**	0.6460	0.0392
Sargan $\chi2$ from IV (2SLS) method	0.1583	0.1635	0.9776	14.9209***
Basmann $\chi2$ from IV (2SLS) method	0.1564	0.1615	0.9659	14.8513***

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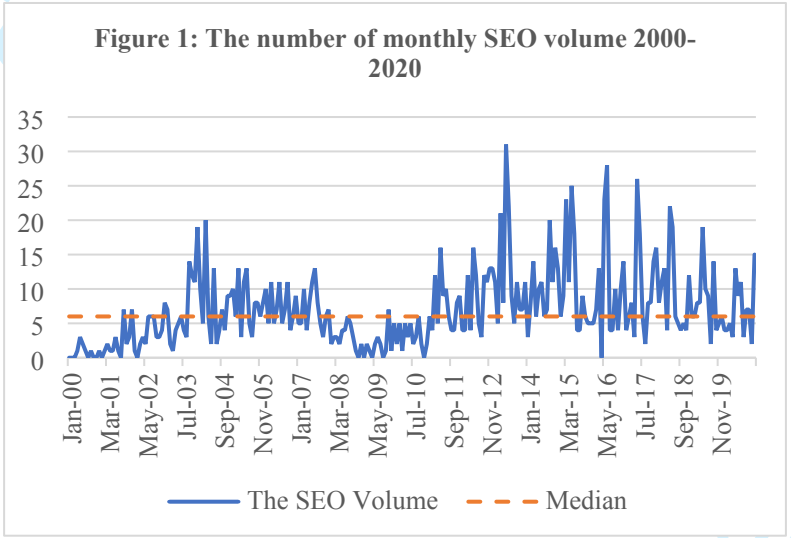
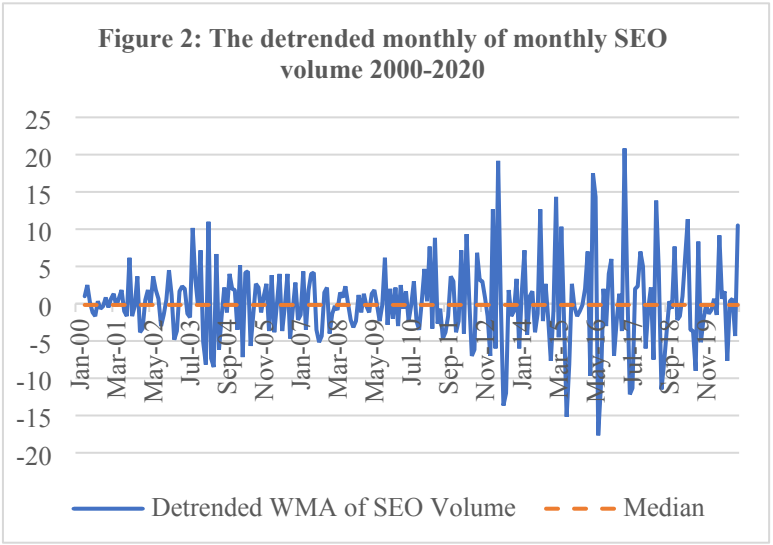
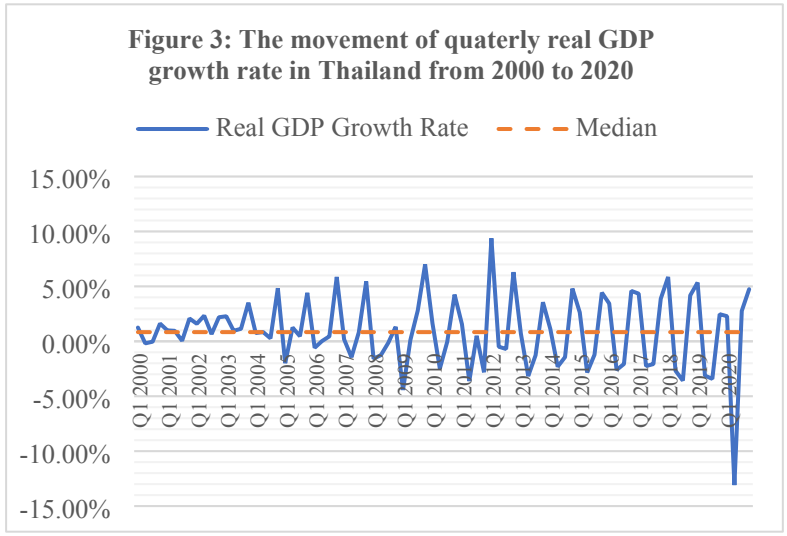
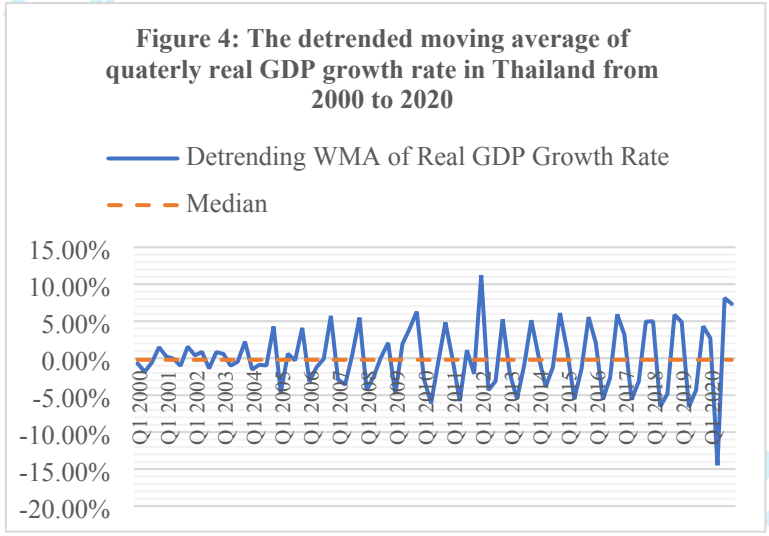




Source: *SET's Fact Books, SETSMART and Thomson One*





Source: *Datastream*

Figure 5: The monthly volume of stock market return 2000-2020

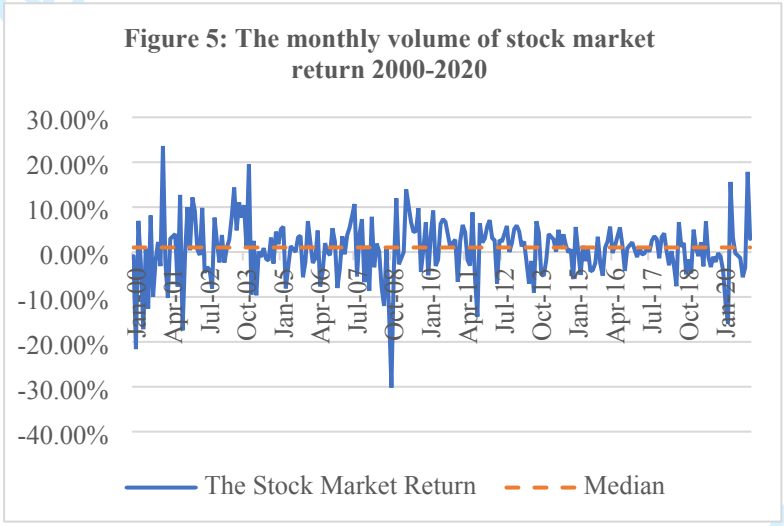
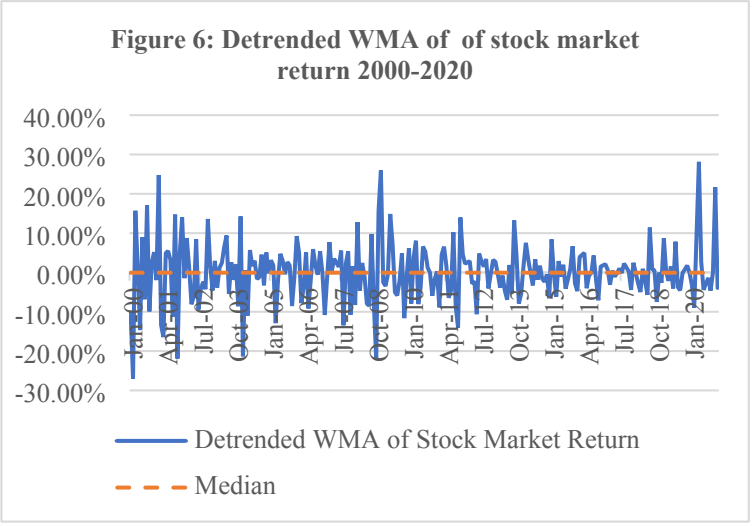


Figure 6: Detrended WMA of of stock market return 2000-2020



Source: *LSEG (Refinitiv) Datastream*

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RESPONSE LETTER

IJMF-06-2024-0356 entitled "Stock Mispricing, Corporate Governance, and SEOs Market Timing.

Dear Editor and the Reviewers

Thank you for your time in assessing our manuscript. We have carefully dealt with all the comments received. The manuscript has been significantly improved. Below, we first provide the original comments by the reviewers in **bold**, followed by our responses in *italic*. Moreover, we indicate all changes in our manuscript by using the red colour for the text. We hope that this version will satisfy the reviewers.

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Reviewer #1:

1. Originality: Does the paper contain new and significant information adequate to justify publication?:

The manuscript presents novel insights into the equity market timing behavior of firms in Thailand, focusing on the interplay between stock overpricing, ownership structure, and board characteristics. The introduction of innovative explanatory variables and advanced methodological approaches enhances the originality of this study. The comprehensive dataset spanning 1,747 SEOs over two decades adds significant depth and breadth to the analysis. These factors collectively justify the paper's publication. The study's application of both the DCF and RIM methods to assess equity overpricing provides a nuanced perspective that is rarely explored in existing literature. This dual-method approach is particularly valuable for understanding the diverse strategies firms may employ when timing the equity market.

OUR RESPONSE:

Many thanks for providing positive comments about our paper. The revised version is clearer and better in this context as well.

2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?:

The manuscript demonstrates a thorough engagement with the relevant literature, effectively situating its findings within the broader academic discourse on equity market timing and corporate governance. However, incorporating additional studies on equity market timing in other emerging markets could enhance the paper's global relevance.

Recommendation:

• Elitzur & Solodoha (2021): This paper could be cited in the section discussing the role of ownership structure in market timing, particularly in relation to the diversity of shareholders and decision-making dynamics. For example, "In addition to our findings, Elitzur and Solodoha (2021) provide evidence on how gender diversity among shareholders can influence decision-making in crowdfunding platforms, which parallels the influence of diverse ownership structures in SEOs."

• Solodoha et al. (2023): This study can be integrated into the discussion on the implications for practice and policy, emphasizing the importance of investor incentives. For example, "Solodoha et al. (2023) highlight the critical role of incentivizing investors

to engage with startups, a finding that aligns with our results on the significance of board and ownership structures in SEOs."

• Harel et al. (2022): Their research on entrepreneurial resilience and success in M&As can be cited when discussing the broader implications of market timing on firm performance and strategic outcomes. For example, "The resilience of entrepreneurs, as evidenced by Harel et al. (2022), underscores the potential long-term impacts of strategic market timing on firm success."

OUR RESPONSE:

References for this response:

Elitzur, R. and Solodoha, E., 2021. Does gender matter? Evidence from crowdfunding. Journal of Business Venturing Insights, 16, p.e00268.

Harel, S., Solodoha, E., & Rosenzweig, S. (2022). Can entrepreneurs who experienced business closure bring their new start-up to a successful M&A? Journal of Risk and Financial Management, 15(9), 386.

Solodoha, E., Rosenzweig, S. and Harel, S., 2023. Incentivizing angels to invest in start-ups: Evidence from a natural experiment. Research Policy, 52(1), p.104634.

We have added the above references in our manuscript as below.

Please see Section 6 pages 23-24

"…In addition to our findings, Elitzur and Solodoha (2021) provide evidence on how gender diversity among shareholders can influence decision-making in crowdfunding platforms, which parallels the influence of diverse ownership structures in SEOs."

Please see Section 6 page 24

"As a result, our findings explore that ownership structure and board structure have a crucial effect on SEO market timing. This is broadly in line with the work of Solodoha et al. (2023) who highlight the critical role of incentivizing investors to engage with startups, a finding that aligns with our results on the significance of board and ownership structures in SEOs. However, we should note that other factors may relate to SEO market timing. For example, the resilience of entrepreneurs, as evidenced by Harel et al. (2022), underscores the potential long-term impacts of strategic market timing on firm success. Moreover, the importance of ethical marketing practices as highlighted by Friedmann et al. (2024), which can be extended to corporate governance to ensure that market timing strategies do not exploit information asymmetries to the detriment of shareholders. Effective communication with investors,

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as highlighted by Solodoha and Blaywais (2023), is crucial for maintaining investor trust and can influence the success of market timing strategies. Also, the importance of matching processes between entrepreneurs and investors as discussed in Solodoha (2022), which can enhance the efficiency and outcomes of market timing strategies."

3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?:

The methodological rigor of the paper is commendable. The use of generalized least squares (GLS) and probit regressions to analyze a comprehensive dataset of 1,747 SEOs in Thailand is well-justified. The inclusion of both DCF and RIM methods for stock valuation adds robustness to the analysis.

OUR RESPONSE:

Thank you very much indeed for this comment. In the revised version, we have further improved the paper as regards the methods.

4. Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?:

The results are presented in a clear and structured manner, with appropriate statistical analyses supporting the conclusions. The discussion effectively ties together the various elements of the study, demonstrating how firms in Thailand time the equity market and the impact of ownership and board characteristics on this behavior. The finding that firms with high foreign ownership are more likely to engage in multiple SEOs provides new insights into the strategic behavior of these firms. This could be further highlighted by discussing how this aligns with or differs from previous findings in the literature.

OUR RESPONSE:

This point is well taken. We have discussed our finding with respect to the extant literature. Please see Section 6 page 22 as below.

Foreign ownership

Our findings show that the foreign ownership has a positive effect on the level of equity market timing with multiple SEOs. This is consistent with Dahlquist and Robertsson (2001) and Li et al. (2009) who find that firms with high foreign ownership choose to use less debt as they are outside investors and acting as monitors of SEO firms. Thus, they prefer to avoid high leverage because of high bankruptcy cost and financial stress but they

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have high incentive to issue shares instead of debt capital. As a result, owners encourage their corporations to issue the multiple SEOs. Moreover, our findings are in the line with Luu et al. (2022) who find that there is a quick reaction of foreign investors to the information of SEO announcement; thus, they gain higher stock returns after SEO event. This implies that it is possible that foreign investors strongly react to SEO announcement to increase stock returns. Hence, they prefer the firms to issue several SEOs."

5. Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?:

The paper successfully identifies the implications of its findings for research, practice, and society. It bridges the gap between theory and practice by showing how corporate governance factors influence market timing decisions. The findings have practical applications for regulators, managers, and investors, and can inform policy decisions and enhance corporate governance practices.

Recommendation:

• Friedmann et al. (2024): This study could be cited in the implications section, particularly regarding the ethical considerations and societal impact of corporate governance practices. For example, "Friedmann et al. (2024) emphasize the importance of ethical marketing practices, which can be extended to corporate governance to ensure that market timing strategies do not exploit information asymmetries to the detriment of shareholders."

• Solodoha & Blaywais (2023): This study can be referenced in the discussion on investor communication and engagement. For example, "Effective communication with investors, as highlighted by Solodoha and Blaywais (2023), is crucial for maintaining investor trust and can influence the success of market timing strategies."

• Solodoha (2022): This paper can be integrated into the discussion on improving investor-entrepreneur matching processes, which is relevant to the strategic considerations of SEOs. For example, "Solodoha (2022) discusses the importance of matching processes between entrepreneurs and investors, which can enhance the efficiency and outcomes of market timing strategies."

OUR RESPONSE:

Thank you for the recommendations. We have cited the papers in the revised version of our manuscript.

References for this response:

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Friedmann, E., Weiss-Sidi, M. and Solodoha, E., 2024. Unveiling impact dynamics: Discriminatory brand advertisements, stress response, and the call for ethical marketing practices. Journal of Retailing and Consumer Services, 79, p.103851.

Solodoha E.(2022). Improving the matching process between entrepreneurs and investors. Annals of Social Sciences & Management Studies, 7(5), pp.1-2.

Solodoha, E. and Blaywais, R., 2023. Do updates matter? A comparison between rewards-based and donation-based crowdfunding platforms. Journal of General Management.

Please see Section 6 page 24 as below.

"As a result, our findings explore that ownership structure and board structure have a crucial effect on SEO market timing. This is in the line of Solodoha et al. (2023) who highlight that the critical role of incentivizing investors to engage with startups, a finding that aligns with our results on the significance of board and ownership structures in SEOs. However, we should note that other factors may relate to SEO market timing. For example, the resilience of entrepreneurs, as evidenced by Harel et al. (2022), underscores the potential long-term impacts of strategic market timing on firm success. Moreover, the importance of ethical marketing practices as highlighted by Friedmann et al. (2024), which can be extended to corporate governance to ensure that market timing strategies do not exploit information asymmetries to the detriment of shareholders. Effective communication with investors, as highlighted by Solodoha and Blaywais (2023), is crucial for maintaining investor trust and can influence the success of market timing strategies. Also, the importance of matching processes between entrepreneurs and investors as discussed in Solodoha (2022), which can enhance the efficiency and outcomes of market timing strategies."

6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.:

The manuscript is well-written, with clear and concise language appropriate for the target audience. However, some complex sentences could be simplified to improve readability, and consistent terminology should be maintained throughout the paper. For instance, the sentence "This suggests that timing firms may not have growth opportunities but are still timing the window of opportunities for conducting the SEO issuances, so they keep the money from timing the equity market as cash and short-term investments" could be simplified to "This indicates that firms timing the market may lack immediate growth opportunities, opting to retain SEO proceeds as cash and short-term investments."

Overall, the paper makes a significant contribution to the field.

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OUR RESPONSE:

We thank the reviewer for raising this point. In the revised version of the paper, we have eliminated complex sentences and they are now simpler. We have also made sure that we adhere to consistent terminology. Please see Section 6 page 21 as below.

"Nevertheless, our findings reveal evidence that timing firms during the hot period tend to keep their proceeds as cash and short-term investments after SEOs are conducted. This is consistent with Blanchard et al. (1990), Loughran and Ritter (1997), Kim and Weisbach (2008) and DeAngelo et al. (2010) who asserted that there was stock market timing because of the increase of cash after equity issuance. This indicates that firms timing the market may lack immediate growth opportunities, opting to retain SEO proceeds as cash and short-term investments."

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Reviewer #2:

1. **Originality: Does the paper contain new and significant information adequate to justify publication?:**

Contribution: The paper adds to SEO literature by exploring Thailand's unique market timing dynamics and emphasizing corporate governance factors like ownership structure and board characteristics. It also innovates by comparing DCF and RIM valuations, which could yield insights into valuation-driven market timing.

While it presents some interesting findings, there are concerns about its originality and contribution:

1) Missing citations: The authors have overlooked at least two highly relevant doctoral dissertations on market timing in Thailand:

Kumpamool, Chamaiporn (2018). "Equity and debt market timing, cost of capital and value and performance: evidence from listed firms in Thailand." University of Hull.

Lerskullawat, Polwat (2011). "Seasoned equity offerings in an emerging market: evidence from Thailand." University of Birmingham.

Thank you for your comments. We have now cited the mentioned PhD theses in the revised version of the manuscript.

Please see the introduction section- pages 4-5 as below.

"… However, they do not directly investigate equity market timing since they imply their results from the decline of firm performance after SEO allocation. Lerskullawat (2011) reports that stock prices react negatively to SEO announcements in Thailand and insider ownership is a crucial determinant of SEO stock price reaction. Moreover, they also find that there is a negative effect of firm size on SEO underpricing in Thailand and there is underperformance for SEO firms after SEO issuances. Kumpamool (2018) finds that IPO and SEO firms tend to issue stocks when the stock markets are hot, in economic booms and bullish conditions. Moreover, corporate governance is a vital determinant of equity market timing. Dimic et al. (2019), on the other hand, resort to the bond–equity yield ratio for market timing ability in the emerging markets by the investors."

2) Overstated novelty claims: The paper's claims of being the first to explore certain aspects, such as the use of economic boom/bust periods in market timing and the impact of board diversity on SEOs in Thailand, appear to be incremental rather than

groundbreaking. The study lacks a strong argument for why the chosen explanatory variables are significant in the specific context of an emerging market like Thailand.

OUR RESPONSE:

We appreciate this comment as well and agree with the reviewer. Therefore, reduced the tone in order to avoid any overstatement of our contributions. Please see the introduction section-page 7, reported as below.

"We contribute to the extant literature in *six* respects. *First,* this study is the first to estimate the intrinsic value of equity overpricing in the stock market timing literature employing four different methods consisting of the DCF, RIM, Tobin's q ratio and abnormal stock returns approaches. *Second,* our study departs from the literature in that it examines the effects of board size on the probability of stock market timing during economic boom periods. *Third,* our study is the first to reveal that ownership concentration and women on the board have an effect on the level of stock market timing with proceeds ratio. *Fourth,* our study is the first to show that board size has an impact on the level of stock market timing regarding the quantity of SEO issuance during the allocation period. *Fifth*, we use the IV-probit and IV (2SLS) regression methods to deal with the endogenous issue. *Finally,* this paper explores stock market timing in Thailand, which is a developing economy covered by very few studies and the implications of our study can provide visions for peer emerging markets, and for investors and portfolio managers considering investing in developing economies' stock markets. The extant studies provide contradictory evidence about whether the stock market of Thailand is weak-form efficient (Kim & Shamsuddin, 2008; Aumeboonsuke, 2012). Therefore, we contribute to the existing knowledge and debate relating to developing financial markets and our findings can potentially promote mechanisms for reducing agency problems and enhancing corporate governance in Thailand and other emerging markets."

We have also expanded on the arguments for using the chosen explanatory variables. Please see Section 3 pages 13-14 as below.

"The reasons for selecting the explanatory variables including equity overpricing, foreign ownership, ownership concentration, independent board members, board size, women on board and CEO duality are as follows. Equity overpricing is possibly a crucial determinant of equity market timing as Baker and Wurgler (2002), Dittmar and Field (2015) and Jarallah et al. (2018) claim that firms tend to finance with equity issuance when their stocks are overvalued to minimize cost of capital. Over recent years, there has been a significant increase in global

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economic and financial liberalization, which this increases the presence of foreign investors in emerging markets (Thanatawee, 2021). Thus, it is interesting to investigate this factor in the context of equity market timing especially as there are currently few research studies dealing with this issue. Firms with higher ownership concentration may avoid the issue of new shares to avoid the dilution of shareholder wealth (Céspedes et al., 2010). Thus, it is likely that ownership concentration may relate to equity market timing with SEO issuance. The probability of equity financing increases with higher board independence as stronger corporate governance leads to a decrease in agency costs (Mande et al., 2012). Moreover, Ferreira and Laux (2016) find that firms with higher board independence tend to gain higher SEO returns. Hence, it is possible that board independence may be associated with SEO market timing. Firms with smaller board size prefer to use equity financing (Abor, 2007). Moreover, Dasilas and Leventis (2013) find that firms with smaller boards tend to earn higher SEO returns. Thus, we investigate the effect of board size on the SEO market timing. In addition, it is likely that women may be more conservative and risk averse than men (Byrnes et al., 1999). Hence, women on boards may encourage firms to follow more conservative policies. Moreover, Garcia and Herrero (2021) find that the proportion of female directors is the most powerful board characteristics for decisions about capital structure. Besides, they find that firms with higher proportions of female directors on their board tend to use equity financing. As a result, we include the proportion of women on the board to test equity market timing which is one of the key policies affecting capital structure. CEO duality is a key corporate governance variable of interest (Syriopoulos and Tsatsaronis, 2012). Puwanwnthiren et al. (2019) find that firms with CEO duality tend to reduce undertaking accelerated SEOs. Additionally, Abor (2007) and Bokpin and Arko (2009) find that duel CEOs do not prefer to use equity financing. Thus, it is likely that CEO duality may be an influential determinant of SEO market timing."

2. ***Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?:***

The paper demonstrates a good understanding of the relevant literature, citing key studies in market timing and corporate governance. However, it could benefit from a deeper engagement with studies on emerging markets and corporate governance practices specific to Southeast Asia. The omission of the aforementioned doctoral dissertations is a significant oversight that needs to be addressed.

OUR RESPONSE:

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Thank you again for raising further points. As discussed above. we have now included and discussed the above-mentioned PhD theses. Moreover, we have discussed several papers based on studies from emerging markets including some focusing on the corporate governance practices in Southeast Asia.

The cited papers are as follows:

- Sawichi, J. (2009). Corporate governance and dividend policy in Southeast Asia pre- and post-crisis. European Journal of Finance, 15(2), 211-230.
- Stiglitz, J. E. (1999). Reforming the global financial architecture: Lessons from recent crises. Journal of Finance, 54(4), 1508-1521.
- Soesastro, H. (2000). Governance and the crisis in Indonesia. P. Drysdale (1st Ed.), Reform and recovery in East Asia (p. 25). Routledge.
- Nam, S-W. and Nam I. C. (2004). Corporate governance in Asia: Recent evidence from Indonesia, Republic of Korea, Malaysia, and Thailand. Asian Development Bank Institute.
- Thuy, H. X., Khuong, N. V., Anh, L. H. T., & Quyen, N. (2024). Effect of coporate governance on corporate social responsibility in Vietnam: State-ownership as the moderating role. Journal of Financial Reporting and Accounting, 22(2), 701-727.

Please see the introduction section- pages 3-4 as below.

"Poor corporate governance practices have long been evident in Southeast Asia, especially during the period of the 1997-1998 Asia financial crisis (Sawichi, 2009). After that, to mitigate the imbalances in governance mechanism which were one of the main causes of the crisis, governments in Southeast Asia originated programs for structural reforms (Stiglitz, 1999). However, it seems that weak corporate governance practices in Southeast Asia persist. For instance, Soesastro (2000) find that the reforms and recovery efforts and programs in Indonesia have been sluggish and unsatisfactory because of poor governance. Nam and Nam (2004) document that it is relatively rare to find dispersed ownership in Indonesia and Thailand. The boards of directors in Thailand are too large and lack independent but the board of directors of Indonesia are too small. In addition, the function of boards and board committees in Thailand, Indonesia and Malaysia are weak and inactive. Moreover, there is inadequate support for outside or independent directors in Thailand, Indonesia and Malaysia in matters such as the provision of essential information, access to services, personal assistance, education and training, stock-based incentive compensation and insurance coverage for personal liability. Besides, although several legal regulations have been established to improve the situation, there is an ineffective corporate governance in Vietnam (Thuy et al., 2024). Poor corporate governance practices may lead to inappropriate implementation of the financial policies of firms including capital structure policy. Consequently, it is interesting to investigate equity market timing, which is one of the key capital structure policies of firms in Southeast Asia."

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3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?:

There are several methodological concerns:

1) Valuation Models: While the use of DCF and RIM is interesting, the paper lacks justification for why these models are optimal for Thailand's market. DCF's issues, such as handling negative terminal values, are inconsistently addressed, potentially affecting result reliability. Given the limitations of these methods and the characteristics of Thailand's capital market, traditional proxies for market timing (e.g., Tobin's Q, recent and future abnormal stock returns) might yield more reliable results. At minimum, robustness tests comparing DCF/RIM with these proxies should be included.

2) Market Classification: The classification of hot and cold markets deviates from established methodology (Alti, 2006), potentially introducing biases and undermining result comparability.

3) Fixed Effects: Given the focus on firm-level factors, the use of firm-fixed effects rather than industry-fixed effects would be more appropriate in the regression models to control for unobserved heterogeneity within firms.

4) Endogeneity: The paper's approach to addressing endogeneity concerns is insufficient, relying primarily on lagged variables which may not control for all sources of endogeneity in complex interactions involving corporate governance and market conditions.

OUR RESPONSE:

We appreciate the reviewers for mentioning these aspects of our paper.

Regarding point 3.1: we have discussed the appropriateness of the DCF and RIM for the case of Thailand. Please check the introduction section- shown on page 3 as below.

"Both the DCF and RIM methods are popular valuation models (Yoshinaga, 2022). The DCF method has strengths, and it is one of the most crucial fundamental valuation approaches (Penman, 1992). It can comprehensively and forthrightly capture all components of a firm's value until the final stage (Copeland et al., 1990). Although the use of the DCF method is consistent with the efficiency of financial markets, it is difficult to estimate the relevant terminal values in emerging markets (Wafi et al. 2015). Consequently, we follow the suggestions of Damodaran (1999) and Elliott et al. (2008) to deal with the issues of negative earnings, high debt ratios, and negative terminal value implementation of this method in the case of Thailand. The RIM method does not require the efficiency of financial market and so is quite appropriate for emerging markets such as Thailand

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where the market may not be very efficient (Ragab & Omran, 2006; Bettman et al., 2009; Fung et al., 2010; Wafi et al. 2015; Kim & Shamsuddin, 2008)..”

Furthermore, we have considered robustness tests comparing the DCF and RIM specifications with Tobin’s q ratio and abnormal stock returns.

For these additions, please see “Table 6 (Continued).” on page 37 and “Table 7 (Continued).” on page 39.

Regarding point 3.2: We cannot follow Alti (2006) by using the proportional difference method as the moving average value in this study contains zero values in some months. Thus, it is not possible to use the proportional difference method and we need to use the actual difference method for this measurement. However, we indicate that this discrepancy with the method of Alti (2006) as a limitation of this study on page 21. So, thank you for raising this point.

Regarding point 3.3: We agree that firm fixed effects are generally more appropriate for panel data analyses using company level data. However, 370 of the firms in our sample have issued more than one SEO, and 88 firms did so only once during the sample time period, so our sample (based on the SEO events) is not in standard panel data format. As a result, it is less than appropriate to employ a firm fixed effects method for our models. Having said this, we have attempted to use the fixed effects method and there is an error as below.

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```
Fixed-effects (within) regression               Number of obs      =     1,747
Group variable: Order                           Number of groups   =     1,747

R-squared:                                      Obs per group:
     Within  =      .                                         min =         1
     Between =      .                                         avg =       1.0
     Overall =      .                                         max =         1

                                                F(0, 0)            =      0.00
corr(u_i, Xb) =      .                          Prob > F           =         .
```

ProceedsTAt	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
OPDCF	0	(omitted)				
FROWNt1	0	(omitted)				
HHI3t1	0	(omitted)				
IBOt1	0	(omitted)				
LogBOZt1	0	(omitted)				
WBOt1	0	(omitted)				
CEODt1	0	(omitted)				
PPt1	0	(omitted)				
NGt1	0	(omitted)				
EBITDATAt1	0	(omitted)				
LogSale_Inft1	0	(omitted)				
PPETAt1	0	(omitted)				
DivEt1	0	(omitted)				

Other research studies about SEOs have encountered the same issue with the data and have resorted to cross-sectional data analysis instead of the panel data method. These studies include Baker and Wurgler (2002), Alti (2006), Masulis and Korwar (1986), Loughran and Ritter (1997) and Kim and Weisbach (2008).

We should further note that- in situations where some firms raise equity multiple times during the sample time period- one may possibly consider the LSDV (least squares dummy variables) approach. However, LSDV is not ideal because it severely reduces the degrees of freedom by having so many dummies for each firm. Although LSDV fixes the problem of firm heterogeneity, it bring about another problem: inefficient or less efficient estimation results, which is more serious than firm heterogeneity. In the end, we have refrained from from using the method due to its inappropriateness.

Thanks for helping us clarify this point, and as a consequence we have made the appropriate addition in section 3.3.1 -on page 14, which we show as follows:

"Cross-sectional analyses are used to assess the behavior of companies during SEO events (see e.g., Masulis and Corwar, 1986; Loughran and Ritter, 1997; and Kim and Weisbach, 2008)."

References for this point:

Alti, A. (2006). How persistent is the impact of market timing on capital structure? Journal of Finance, 61(4), 1681-1710.

Baker, M. & Wurgler, J. (2002). Market timing and capital structure. Journal of Finance, 57(1), 1-32.

Kim, W., & Weisbach, M. S. (2008). Motivations for public equity offers: An international perspective. Journal of Financial Economics, 87(2), 281-307.

Loughran, T., & Ritter J. R. (1997). The operating performance of firms conducting seasoned equity offerings. Journal of Finance, 52(5), 1823-1850.

Masulis, R. W., & Korwar, A. N. (1986). Seasoned equity offerings: An empirical investigation. Journal of Financial Economics, 15(1-2), 91-118.

Regarding point 3.4: We appreciate the concerns of the reviewer about endogeneity issues and agree with them. Consequently, we have conducted an IV-probit regression for our dependent variables with dummy variables and an IV(2SLS) regression for our dependent variables with continuous variables. However, we have reported these methods only for the models concerned with the endogenous issue for space considerations. Please see Tables 5-7 on pages 35-40 on the revised manuscript. These results have been mentioned in the main text as appropriate.

4. ***Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?:***

While the paper incorporates numerous board and ownership variables, it lacks a cohesive theoretical framework justifying their inclusion in the context of market timing. The rationale for how each governance aspect influences SEO timing is not clearly articulated, leading to a fragmented presentation of results.

OUR RESPONSE:

We appreciate this comment. In the improved version of our paper, we have provided a more cohesive theoretical framework for the mentioned variables in order to avoid the fragmentated presentation of our findings.

Please see the introduction section- page 6 as indicated below.

"Our empirical analyses together with the development of the hypotheses are embedded in a unified framework that integrates agency theory (Jensen and Meckling, 1976), market timing theory (Baker and Wurgler, 2002), and resource dependence theory (Pfeffer and Salancik, 1978) to establish the theoretical connections

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between governance mechanisms and SEO timing decisions. The implications of these theories (as per our variables) are discussed as follows:

"Grounded in agency theory, foreign investors have been framed as active monitors who impose stricter governance standards, curbing managerial opportunism. Additionally, foreign ownership reduces information asymmetry by signaling credibility to external markets, which aligns with the market timing theory by influencing the optimal timing of SEOs' issuances. High ownership concentration has been discussed in the context of dual agency effects. On one hand, concentrated ownership aligns the interests of managers and controlling shareholders, mitigating agency conflicts. On the other hand, entrenched ownership may facilitate timing decisions that benefit controlling shareholders at the expense of minority investors. This interplay is central to the agency theory. Independent directors have been positioned as an essential governance mechanism, limiting managerial discretion and ensuring decisions, including SEO timing, align with shareholder interests. This monitoring role, rooted in the agency theory, mitigates the risks of opportunistic behaviour in market timing. From a resource dependence theory perspective, larger boards have been shown to bring diverse resources and expertise, improving strategic decision-making, including SEO timing. However, the potential downsides of larger boards, such as inefficiency and slower decision-making, which may affect time-sensitive decisions, should also be taken into account. Gender diversity has been framed as enhancing board deliberations and decision-making quality, as suggested by both the resource dependence theory and the behavioral governance perspectives (Adams and Ferreira, 2009). Women on boards have been argued to reduce risk-taking and opportunism in SEO timing, promoting more transparent and balanced decisions. CEO duality has been discussed as centralising decision-making power, which can either streamline decisions or increase the risk of opportunism, depending on the strength of other governance mechanisms. Within agency theory, we explain how duality interacts with independent board members and ownership structure to influence SEO timing decisions."

5. ***Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?:***

The study is based on a relatively small and unique market with characteristics like concentrated ownership, family control, and low investor protection. The paper fails to

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explicitly address how these contextual elements might limit the generalizability of the findings to other markets.

OUR RESPONSE:

Thank you for highlighting this issue. We agree with the reviewer that the findings based on the Thai corporate sector may not necessarily be indicative for other developing economies although there would potentially be some lessons obtained from our analyses for those countries. In the revised manuscript, we have strengthened the explanations as regards the generalizability of our results in other economies.

Please see Section 7 page 25 as below.

"As this study is related to the specific mechanisms of stock ownership and board structures in Thailand, such as, concentrated ownership, family control and low investor protection this may limit the generalizability of our findings to other markets. Although, many emerging markets have somewhat similar properties to Thailand in some respects, we suggest it would be prudent to conduct further research to examine other stock markets to check the robustness and generality of our findings.

6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.:

1) While the paper is generally well-written, the structure is somewhat disjointed. The connection between different sections could be strengthened to improve overall coherence.

2) The introduction needs reorganization. The two main research questions should be stated earlier, rather than appearing on the third page.

OUR RESPONSE:

Many thanks for these constructive and useful comments.

Regarding point 6.1: In the improved version of our paper we have mitigated the disjointed structure of our writing style and made sure that the sections are now better connected. Please see the whole paper, especially the changes shown in red ink.

Regarding point 6.2: The style of the introduction has changed as suggested. It is now more organized. Also, we have put the research questions earlier in the introduction section- page 2 as we also provide below.

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"Some other studies, on the other hand, argue that there is no evidence of stock market timing as the equity markets are informationally efficient (see Çelik & Akarim, 2012; Lee et al., 2012; and Chen et al., 2013). As a result, this study attempts to provide further insights into stock market timing to address two research questions: (1) is there equity market timing in Thailand? (2) Do equity overpricing, ownership structure, and board characteristics impact the existence and level of equity market timing?[1] "

[1] In a related study, Zhao and Tang (2023) find evidence for the relevance of CEOs' characteristics in timing the mergers and acquisitions (M&As) activities and in corporate strategic decision making in China.

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