EARNINGS MANAGEMENT AND SUBSEQUENT STOCK PERFORMANCE: EVIDENCE FROM AN EMERGING MARKET

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Abstract

Based on a sample of 161 newly listed firms on the Ho Chi Minh Stock Exchange (HOSE) from 2009 to 2016, the study investigates the pattern of earnings management and stock performance in the long run. This study then explores the effect of earnings management on stock performance in the long run around the listing phenomenon. Two models based on current accruals were adopted for this study to estimate earnings management (Teoh et al., 1998a, 1998b). The study consistently finds that managers have manipulated their company's earnings in the prelisting year but not in the listing year when earnings management is measured by current accruals models. In addition, in line with previous research, significant underperformance was found in all measures over three holding periods: 12, 24 and 36 months. Finally, the results also demonstrate that companies associated with aggressive current accruals in the year before listing tend to suffer from post-listing earnings and share return underperformance. The more aggressive the practice of earnings management, the greater its adverse effect on stock performance in the following years.

Keywords: Current Accruals Models, Earnings Management, Stock Performance, Listing, Vietnam

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1. INTRODUCTION

Firm-specific events, such as issuing shares through initial public offerings (IPOs) and seasoned public offerings (SEOs), are intriguing topics that have received attention from academic scholars. These events play an essential role in the growth and success of a company. They are known as rich information asymmetry contexts in which insiders (i.e., managers) possess greater private information about the company's internal operations, as well as real economic situations and the company's future performance compared to the information available to investors.

In certain situations, in order to increase a firm value or drive higher issue prices, companies are highly motivated to engage in earnings manipulation to mislead potential stakeholders by reporting favorable accounting figures. Some studies illustrate that issuing firms inflate their earnings upward by adopting discretionary accounting accruals during the time of issue, which may be temporary.

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As a result, investors may have been over-optimistic regarding the potential future of these firms. However, as time goes on, any accrual must eventually be reversed. Consequently, investors become disappointed by declining operating performance after listing, leading to a decline in stock prices and poorer long-term stock performance (Loughran & Ritter, 1997). The empirical literature, such as Teoh et al. (1998a, 1998b), Rangan (1998), Shivakumar (2000), DuCharme et al. (2001), Roosenboom et al. (2003), Gajewski and Gresse (2006), Aharony et al. (2010), Ahmad-Zaluki (2008), Iqbal et al. (2009), Nuryaman (2013), Espahbodi et al. (2022), Gao et al. (2017), Lizińska and Czapiewski (2019), Perotti and Windisch (2017), provide varied evidence of income-increasing accruals in the past, thereby decreasing long-run abnormal returns.

Unlike the studies on issuing shares through IPO and SEO events, limited research exists on the subject of earnings management around listing and post-listing stock returns. A listing occurs when firms are listed on a stock exchange, indicating that the firm's stock has just been entered into a stock exchange and the stock begins to be traded. Listing is beneficial to a firm to raise further capital, attain a higher collateral value of securities, and strengthen its structure and reputation. To be listed on a stock exchange, a firm must meet certain listing requirements. As a result, the pursuit of a new listing might motivate firms to inflate their earnings before their entry into the stock exchange (Algharaballi, 2013; Nguyen & Duong, 2021). Hence, if existing manipulated upward earnings occur prior to listing, accruals will be reversed subsequently, leading to poor stock performance in the long term (Nguyen & Thi Duong, 2022).

Building on previous studies, this paper extends the existing literature by examining the impact of earnings management on stock performance in several ways. First, while the majority of prior studies have centered on IPOs and SEOs, resulting in inconsistent findings, there has been a limited emphasis on analyzing listing events. Studies conducted on IPOs across different countries reveal that the time gap between the date of issuance and listing is typically brief, typically spanning from five to seventy days (Boubaker et al., 2017). However, in certain developing nations such as Vietnam, the delay from the issuance date to the listing date can be substantial (Duong Thi, 2023). During the time lag, the performance of newly listed companies and their subsequent returns in the market can be influenced by fluctuations in market conditions. Therefore, it is imperative to investigate earnings management and stock performance around listing events. In addition, due to the unique characteristics and varying trends in the market compared with those in developed markets, the stock market in Vietnam has experienced rapid growth and integration into the global market. As a result, it has established itself as one of the swiftly evolving emerging markets worldwide, making it an ideal choice for this research. In Vietnam, IPOs and listings are separate procedures, with listing requirements being more stringent compared to IPOs (Allens, 2017). In comparison with other countries in Asia region such as Malaysia, Pakistan and the Philippines, in

which stock exchanges have transformed to become listed on their own exchanges, the stock exchanges in Vietnam continue to operate as governmentowned entities, subject to supervision and regulation by the government.

The Vietnamese Stock Exchange is widely recognized as a highly promising and potentially prospective market that has played a crucial role in the Vietnamese economy in recent years. In Vietnam, a recent survey shows that the average value of stock market capitalization was about 50% of gross domestic product (GDP) in 2017, reaching a new peak of nearly 87.68% of GDP in 2020 (Vietnam News Agency [VNA], 2021). With such a promising prospect within reach, the future of Vietnam's stock market shines with even greater optimism than before. In order to easily access the capital market and boost the company's public image, the number of listing firms has grown rapidly by more than two times. The number of companies listed on the stock market witnessed a minimum of 330 in 2008 and a maximum of 749 in 2018. Recognizing the significant role of the stock market since its establishment, the Vietnamese government has been actively striving to enhance the legal framework and overall environment surrounding the stock market. Consequently, over the span of two decades, Vietnam's securities market has evolved from an early stage with limited efficiency to become one of the most appealing destinations for foreign investors worldwide. However, the market has encountered various challenges in recent years, including issues such as transparency deficiency, regulatory coordination gaps, a fragile legal environment, market manipulation, and herd behavior (Vo & Phan, 2016; Zingales, 2009).

With the growing importance of listing firms to the Vietnamese economy, it is necessary to empirically investigate earnings management surrounding the listing event, subsequent firm performance, and how earnings management during listing could affect long-run stock performance. Currently, such studies might be more limited. All these arguments lead us to conduct this research with the purpose of investigating this phenomenon in Vietnam, based on a sample of 161 listing firms on the Ho Chi Minh Stock Exchange (HOSE) between 2009 to 2016.

The structure of this paper is as follows. Section 2 illustrates the literature review and our research hypotheses. Section 3 provides research methodology and Section 4 details the results and discussion. Finally, conclusions are presented in Section 5.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Numerous studies in accounting literature have documented earnings management practices and their effects on firm performance. These studies have linked the performance of public equity issues (IPOs and SEOs) to information asymmetry theory. The context is high information asymmetry between issuers and investors at the time of offering, in which firms take advantage of their superior knowledge to obtain the highest price possible by using favorable accounting methods to manipulate earnings upward through income-increasing accruals. During the event year, issuers tend to



increase their earnings through these practices. However, as accounting accruals eventually reverse, firms tend to underperform in the long run (Aharony et al., 2010; Ahmad-Zaluki et al., 2011; Ardekani et al., 2012; DuCharme et al., 2001; Gajewski & Gresse, 2006; Hung & Van, 2020; Iqbal et al., 2009; Nuryaman, 2013; Rangan, 1998; Roosenboom et al., 2003; Salehi et al., 2018; Shivakumar, 2000; Teoh et al., 1998a, 1998b).

In addition, agency theory and divergence of opinion are widely used to explain the relationship between earnings management and stock performance. According to these theories, if investors are deceived by earnings management before corporate events such as IPOs, and SEOs (DuCharme et al., 2001; Fan, 2007; Loughran & Ritter, 1997; Ritter, 1991), they are more likely to have overly optimistic expectations about the company's future growth. Since then, investors overestimate the company's value and are willing to pay a higher price compared to pessimistic investors. As time goes by, as information about the firms becomes more widely available, the divergence of opinion between optimistic and pessimistic investors will be reduced. Investors adjust their beliefs about the company's value and tend to be disappointed, which can result in a decline in stock price (Ahmad-Zaluki, 2008). Consequently, it can lead to a stock performance decline in the long run. However, another group of scholars has raised questions regarding the presence of earnings management and the relationship between earnings management and stock performance such as Ball and Shivakumar (2008), Armstrong et al. (2016), Chou et al. (2010), Chiraz and Anis (2013), Premti (2013), Salehi et al. (2018).

In the US, Teoh et al. (1998a, 1998b) were known as pioneer scholars in examining the relationship between earnings management (measured by discretionary current accruals) and stock performance. Their research has had a significant influence on a wide range of research communities. Using data from both US IPO firms and SEO firms, Teoh et al. (1998a, 1998b) concluded that firms with high discretionary accruals in the IPO year experienced poor stock returns in the subsequent three years. In addition, based on a sample of 230 US firms for the period from 1987 to 1990, their research provided further evidence that firms with high levels of earnings management in the SEO year tended to suffer poor performance in the following years. While the scholars mentioned above examined earnings management (abnormal accruals) during the year of events IPO and SEO, a different view is provided by Shivakumar (2000) and DuCharme et al. (2001), in which authors raise questions regarding firms opportunistically managing earnings upward before offer dates. In the context of SEOs, Shivakumar (2000) shows that earnings management was high before SEOs and negatively associated with post-offering stock returns. Moreover, DuCharme et al. (2001) made a note income income-increasing abnormal accruals in the year before IPO and SEO, based on a sample of 171 firms for the period from 1982 to 1987 from Thomson Financial's Global New Issues database. DuCharme et al. (2001) support the view that firms inflate their earnings before equity offering through positive abnormal accruals components. Subsequently, accruals tend to reverse during the post-offering period, which is negatively related to post-offering stock returns. In comparison, in the US where a new context arose

after Sarbanes–Oxley (SOX) was enacted in 2002 with more stringent monitoring standards for issuers to limit the potential of accruals management, Xu (2016) examines the presence of earnings management in the post-SOX period. A study conducted by Xu (2016) shows that firms still use discretionary accruals to manipulate their earnings upward in the year of the event, rather than in the previous year. Confirming previous studies, the evidence illustrates that higher abnormal accruals predict underperformance in the post-IPO year.

A pioneering study by Roosenboom et al. (2003) has addressed the issue of earnings management in the European IPO market. This study used a sample of 64 IPO firms in the Netherlands and used current discretionary accruals as proxies for earnings management to test their impact on a firm's performance. The evidence illustrates that managers manipulated their earnings in the IPO year rather than in the pre-IPO year and there is a negative relationship between accruals and long-run stock price performance in the subsequent three years. Another survey conducted by Gajewski and Gresse (2006) provided additional empirical evidence of earnings management and specifically poor post-IPO long-run performance in 15 European IPO countries. Similarly, in an examination of different environments, Aharony et al. (2010) in China, Ahmad-Zaluki (2008) in Malaysia, Iqbal et al. (2009) in the UK, Nuryaman (2013) in Indonesia have reported similar interpretations of evidence showing aggressive earnings management in the IPO (SEO) process and post-listing poor performance. In a different context, listing events, Algharaballi (2013) also found the existence of a negative relationship between earnings management in the pre-listing year and long-run stock performance.

Recently, a considerable amount of literature has tried to find evidence of the impact of earnings management on long-run performance in different markets outside of corporate events. By using the data sample of 1,680 firm-year observations from companies listed on the Tehran Stock Exchange (TSE) during 2009-2014, Salehi et al. (2018) found that earnings management is not significantly associated with firms' stock return. In contrast, in the Vietnamese and Indonesian markets, Hung and Van (2020) and Tang and Alvita (2021) respectively found that earnings management has a significant effect on stock return. Interestingly, Ali and Bansal (2023), using a sample of 3085 Bombay Stock Exchange (BSE), provided a comprehensive view of the relationship between earnings management and stock returns depending upon the magnitude of two forms of earnings management (downward and upward). Ali and Bansal (2023) added further evidence for the existence of a negative association between two forms of earnings management and stock return with lower (higher) stock returns for higher (lower) earnings management.

The existing accounting literature on earnings management and performance surrounding equity issuance (IPO, SEO) provides a comprehensive document. Although much research has presented evidence of a high level of discretionary accruals around equity issues, their impact on long-run performance after events remain controversial. Among those leading the controversy were Ball and Shivakumar (2008). The authors provided conflicting evidence in the UK that the evidence of systematic earnings management was not found in IPO firms. These findings are contrary to the results of previous studies and to popular belief that IPO firms are more conservative in preparing their financial statements. Confirming the findings of Ball and Shivakumar (2008), Armstrong et al. (2016) conducted research by analyzing a sample of IPO companies in the US and found no evidence regarding the relationship between abnormal accruals and stock returns. In other words, managers do not benefit from inflating accruals (opportunistic misreporting), these accruals instead result from normal economic activities. In the context of private equity placements, Chou et al. (2010) support the view that earnings management is not responsible for subsequent poor performance. Motivated by the opposing findings of Teoh et al. (1998a, 1998b) and Ball and Shivakumar (2008), using a sample of 4962 IPOs from 28 countries. Premti (2013) supported the view of Ball and Shivakumar (2008) that, on average, the earnings management of IPO firms is not significantly different from zero, meaning that IPO firms do not seem to inflate their earnings. However, for firms with higher discretionary current accruals (as proxies for earnings management), the study also discovered an inverse correlation between earnings management and long-term performance.

In light of the arguments mentioned above, it can be concluded that there are two opposing views on the phenomenon of earnings management and its connection to the subsequent performance of firms during specific events. One view supports the notion that firms opportunistically manage their earnings upward and negatively affect subsequent firm performance. Meanwhile, another view raises challenges regarding the presence of earnings management and its adverse correlation with the subsequent performance of firms. In addition, the majority of earnings management studies have been conducted in the context of equity issues (IPOs and SEOs) in developed countries. Conversely, listing events has received limited attention in previous research. Consequently, this study aims to investigate the presence of this phenomenon specifically during listing processes in the Vietnamese Stock Market, which is known as an emerging market with a lack of transparency and efficient information and weakness of the market system, an unexplored context in prior literature.

Given the ongoing debate regarding the degree of earnings management and its association with the subsequent performance of companies, the following hypotheses are proposed below:

H1: Listing firms on HOSE show signs of favorable earnings management during the year prior to listing, with a higher degree of positive earnings management in the pre-listing year compared to the listing year.

H2: Listing firms on HOSE experience stock underperformance in the long run.

H3: Earnings management in the pre-listing year is negatively associated with subsequent stock performance.

3. RESEARCH METHODOLOGY

3.1. Measuring earnings management

Discretionary accruals, which are the most commonly used proxies in the area of earnings management, serve as key indicators for testing for earnings management. Previous studies in literature review such as Teoh et al. (1998a, 1998b), Rangan (1998), Roosenboom et al. (2003), Ahmad-Zaluki et al. (2011), argue that current accruals may be superior proxies and more flexible than noncurrent accruals. In addition, since current accruals are more frequently used and their estimation has a higher degree of judgment, the authors claim that non-current accruals are less flexible than current accruals. Therefore, this study employs the modified Jones model (current accruals model), which is known as the most powerful model for detecting management, to compute earnings earnings management. Additionally, Ball and Shivakumar (2008), Armstrong et al. (2016), and Algharaballi (2013) propose that "using low values of lagged total assets (*t*-1) in model produce extreme values of discretionary accruals estimates since pre-listing total assets are relatively small and not representative of the listing-year or post-listing year total assets" (p. 5). The model for assessing current accruals can be derived as follows.

3.1.1. Model 1: The version of the modified Jones model (current accruals model)

Following Teoh et al. (1998a, 1998b), a measure of current accruals can be obtained as in equation:

$$\frac{CA_{i,t}}{A_{i,\frac{t-1+t}{2}}} = \alpha_0 + \alpha_1 * \frac{1}{A_{i,\frac{t-1+t}{2}}} + \alpha_2 * \frac{\Delta REV_{i,t}}{A_{i,\frac{t-1+t}{2}}} + \varepsilon_{i,t}$$
(1)

$$NDCA_{i,t} = \alpha_0 + \alpha_1 * \frac{1}{A_{i,\frac{t-1+t}{2}}} + \alpha_2 * \frac{\Delta REV_{i,t} - \Delta TR_{i,t}}{A_{i,\frac{t-1+t}{2}}}$$
(2)

$$DCA_{i,t} = \frac{CA_{i,t}}{A_{i,(t-1+t)/2}} - NDCA_{i,t}$$
(3)

$$CA_{i,t} = \Delta CAssets_{i,t} - \Delta cash_{i,t} - \Delta CL_{i,t} + \Delta STD_{i,t}$$
(4)

where,

*CA*_{*i*,*t*} — current accruals for firm *i* in year *t*;
 A<sub>*i*,*t*-1+*t*</sup>/₂ — average of beginning and end of year total assets for firm *i* in year *t*;
</sub>

• $\Delta REV_{i,t}$ — is the change in revenues for firm *i* in year *t*;

• $\Delta T R_{i,t}$ — is the change in trade receivables for the firm in year *t*;

• $\Delta CAssets_{i,t}$ — is the change in current assets in year *t*;

• $\Delta cash_{i,t}$ — is the change in cash and cash equivalent in year *t*;

• $\Delta CL_{i,t}$ — is the change in current liabilities in year *t*;

• $\Delta STD_{i,t}$ — is the change in debt included in current liabilities in year *t*;

• *NDCA*_{*i,t*} — nondiscretionary current accruals for sample firm *i* in year *t*;

• $DCA_{i,t}$ — discretionary current accruals firm *i* in year *t*.

3.1.2. Model 2: The cash flow model

The second model is suggested by Dechow (1994) and Francis et al. (2005). Their studies advocate detecting earnings management by including cash

$$\frac{CA_{i,t}}{A_{i,\frac{t-1+t}{2}}} = \alpha_0 + \alpha_1 * \frac{1}{A_{i,\frac{t-1+t}{2}}} + \alpha_2 * \frac{\Delta REV_{i,t}}{A_{i,\frac{t-1+t}{2}}} + \alpha_4 * \frac{\Delta CFO_{i,t}}{A_{i,\frac{t-1+t}{2}}} + \varepsilon_{i,t}$$
(5)

the following equation.

where, $\Delta CFO_{i,t}$ — the change in cash flow firm *i* in year *t*.

3.2. Measuring stock performance

The measurement of the long-run performance of stock returns remains controversial (Fama, 1998; Gajewski & Gresse, 2006; Mitchell & Stafford, 2000). Currently, there are two common alternative measures used to calculate long-run stock performance: cumulative abnormal returns (CAR) and buy-andhold abnormal returns (BHAR). CAR is designed to determine if firms persistently earned abnormal returns each month with rebalancing (Lyon et al., 1999) and is cumulatively summed over the holding period. On the other hand, BHAR represents long-term abnormal stock returns and measures the return to investors who hold securities for a long term, calculating compounded monthly returns without rebalancing (Wolfe, 2009). Moreover, CAR represents whether sample firms consistently earn abnormal returns, while BHAR describes whether sample firms yield abnormal stock returns over a particular time horizon. BHAR is strongly recommended and employed by Barber and Lyon (1997), Kothari and Warner (2007), Dutta and Jog (2009), Drobetz et al. (2005), Moshirian et al. (2009), Gajewski and Gresse (2006). The authors argue that CAR does not accurately measure investors' long-term experience and is also a biased predictor. Therefore, BHAR is a better method and less distorted than the CAR method. However, BHAR is severely skewed to the right (Drobetz et al., 2005; Fama, 1998; Lidén, 2006). Therefore, there is no perfect method to measure long-run stock performance as the choice between CAR and BHAR methods involves a trade-off, leading to different types of errors (Rosen, 2006). All these arguments above lead us to adopt both measures of subsequent stock performance in this study: BHAR and CAR.

There are alternative benchmarks used to measure long-run stock performance in literature, such as market indices-based benchmarks (Ritter, 1991; Teoh et al., 1998a, 1998b; Roosenboom et al., 2003; Ahmad-Zaluki, 2008; Kamel, 2012; Gao et al., 2015) and matching-firm based benchmarks (Ritter, 1991; Roosenboom et al., 2003). However, due to the small number of available matching firms in the market, using matching benchmarks would result in overlapping. Therefore, this research is unable to use a matching benchmark due to a small sample of non-issuing matching firms in the Vietnam market. In the main analysis of this study, the market benchmark — the Vietnam Stock Index (VN composite index) is used as the benchmark to measure abnormal returns.

flow in the model. According to their argument, the quality of accruals is contingent upon

the accuracy of forecasting a business's cash flow.

This is because accruals in accounting serve

the purpose of distinguishing the timing of cash

flows from their recognition in financial statements.

In addition, McNichols and Wilson (1988) and

Kasznik (1999) suggest that performance (operating

cash flow) is related to the estimation of discretionary accruals. In line with this view, in order

to control the effect of operating cash flows, an additional variable — the changes in operating

cash flow are used as an explanatory variable, as in

$$BHAR_{i,t} = \prod_{t=0}^{T} (1+R_{i,t}) - \prod_{t=0}^{T} (1+R_{m,t})$$
(6)

$$CAR_{it} = \sum_{t=0}^{T} (R_{i,t} - R_{m,t})$$
(7)

where,

• $CAR_{i,t}$ — cumulative abnormal returns of firm *i* for over a holding period (12, 24, 36);

• $BHAR_{i,t}$ — buy and hold return of firm *i* for over a holding period *T* (12, 24, 36) (the difference between the return of stock and market return);

• $R_{i,t}$ — the rate of return of stock *i* month *t*;

• $R_{m,t}$ — the rate of return of the selected market index *m* in month *t*;

• t — relative-time index starting in the first month in the window period or month 0, in which month 0 is defined as four months after the close of the fiscal year (0).

Consistent with prior studies such as Teoh et al. (1998a, 1998b) and Gao et al. (2015), long-run returns are calculated starting from the fourth month after the end of the fiscal year of listing. This allows for reporting lag to ensure that financial statements of the listing year are available to all investors.

3.3. Sample selection and data

The initial sample includes firms listed on HOSE from 2009 to 2016 in all 11 sectors. Consistent with prior research, the banking and finance industry is excluded from the initial sample due to its different reporting criteria. In order to estimate accruals, firms without the required data are also excluded from the sample. After removing these firms, the final sample consists of 161 firms in 8 sectors, with 6 firms in consumer staples, 18 firms in consumer discretionary, 30 firms in materials, 54 firms in real estate, 3 firms in health care, and 2 firms in energy.

Accounting data were collected from the financial statements of all listed companies on HOSE during the period 2009–2016 from two different open-source databases including HOSE and Vietstock Securities Corporation. For stock returns variables which include stock prices and market indices of HOSE (VN-index) are obtained from the HOSE database and the State Securities Commission of Vietnam database from 2009–2019.

4. RESULTS AND DISCUSSION

4.1. Test of earnings management around listing

Table 1 illustrates descriptive statistics for the sample of 161 firms' earnings management in the pre-listing and listing years when adopting two models: the current accruals model and the cash flow model based on current accruals. In general, the figures in the pre-listing year are higher than those in the listing year. Panels A and B of Table 1 show that both means and medians of discretionary are positive in the pre-listing year and listing year, except for the median of *DCA* in the listing year, which reports a negative median of -0.0069. In addition, to assess whether the means and medians of DCA and DCA (CFO) in both years are statistically different from zero, two-tailed t-tests and Wilcoxon signed-rank tests were used. As a result, the highest level of positive DCA and DCA (CFO) (medians and means) was found in the pre-listing year, statistically different from zero at the 1% level. In the listing year, while the means and medians of discretionary current accruals are significant at the 10% level for the cash flow model, the difference is not significant for the current accruals model.

Two types of discretionary accruals	Mean	Median	Min	Max	Std. dev.			
Panel A: Current accruals model								
DCA (pre-listing)	0.0727***	0.0453***	-0.5189	1.0079	0.2472			
DCA (listing)	0.0158	-0.0069	-0.5196	0.8819	0.1957			
Panel B: Cash flow model based on current accruals								
DCA (CFO) (pre-listing)	0.0803***	0.0510***	-0.9532	1.0987	0.2549			
DCA (CFO) (listing)	0.0296*	0.0132*	-0.9363	0.6103	0.2028			

Note: ***, ** and * indicate a significant level at the 1%, 5% and 10% levels respectively.

Tables 2 and 3 illustrate the results of the testing differences (matched-pairs t-test and Wilcoxon signed-rank test) between the current discretionary accruals of both models in the pre-listing and listing years. These results support that means and medians for discretionary accruals derived from the two models were statistically higher in a prelisting year compared to the listing year at a significance level of 5%.

Table 2. Comparison between pre-listing year and listing year in earnings management based onmatched-pairs t-test

Model test	Fiscal year	Mean DCA	Т	p-value	
1 Current accruals model	Pre-listing	0.0727	2 1 2 8 0	0.0240	
1. Current accruais moder	Listing	0.0158	2.1360	0.0340	
2. Cash flow model based on sument assurate	Pre-listing	0.0803	1.0017	0.0481	
2. Cash now model based on current accruais	Listing	0.0296	1.9917		

Table 3. Comparison between pre-listing year and listing year in earnings management based on Wilcoxonsigned-rank test

Model test	Fiscal year	Median DCA	Positive rank	Negative rank	p-value	Z-score
1 Current accruals model	Pre-listing	0.0453	91	70	0.0551	1.918
1. Current accruais model	Listing	-0.0069				
2. Cash flow model based on sument accounts	Pre-listing	0.0510	90	71	0.0369	2.087
2. Cash now model based on current accruais	Listing	0.0132				

In summary, the results demonstrate that HOSE listing firms exhibit significantly higher positive earnings management in the pre-listing year than in the listing year, thereby supporting *H*1.

4.2. Test of stock underperformance in the long run

Table 4 illustrates the *CAR* and *BHAR* values which are calculated for three holding periods 12, 24, and 36. The *CAR* (*BHAR*) means and medians are negative

for all periods. This research employs both a twotailed t-test and a Wilcoxon signed-rank test to determine whether the means and medians of *CARs* and *BHARs* are statistically different from zero. The results of both tests indicate that the means and medians of *CARs* and *BHARs* are statistically significantly different from zero at the 1% level.

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Variable	Obs	Mean	T (one-sample t-test)	Median	Z (Wilcoxon signed-rank test)	Min	Max
CAR							
CAR12	161	-0.0774**	(2.0063)	-0.1652***	(3.5390)	(1.1183)	2.2431
CAR24	161	-0.1485***	(2.9785)	-0.1756***	(3.2720)	(1.7351)	2.4121
CAR36	161	-0.1084*	(1.9020)	-0.1686**	(2.2780)	(2.2495)	2.7963
BHAR							
BHAR12	161	-0.0839**	(2.1530)	-0.1943***	(4.3440)	(0.8714)	2.2084
BHAR24	161	-0.1207**	(2.1104)	-0.2892***	(4.0550)	(1.4870)	2.5294
BHAR36	161	-0.1148*	(1.7781)	-0.3573***	(3.1740)	(1.4274)	2.2223

Table 4. Descriptive statistics for CARs and BHARs (three holding periods)

Note: ***, ** and * indicate a significant level at the 1%, 5% and 10% levels respectively.

The means *CAR* and *BHAR* values peak in the first holding period (*CAR12* and *BHAR12*) at the 5% significant level (with the mean of the first holding period *CAR12* and *BHAR12* being greater than *CAR* and *BHAR* in the second and third holding periods). In addition, the highest mean underperformances for *CAR* and *BHAR* are found in the second holding period of *CAR24* (-0.1485) and *BHAR24* (-0.1207). Similarly, Table 4 shows the same trend in the median *CARs* and *BHARs* for the three different holding periods.

To investigate the significance of the differences, this research utilizes t-statistics from t-tests and Wilcoxon tests. These tests aim to determine whether the stock performance in the first holding period is statistically higher than that in the subsequent two periods. The t-tests examine the differences in means of stock performance, while the Wilcoxon tests analyze the differences in medians of stock performance. Tables 5 and 6 present the relative magnitude of the difference between means (medians) of the first and subsequent holding periods. For *CAR*, the results from testing the means in Table 5 are consistent with those in Table 6. Both the mean and median of *CAR12* are greater than those of *CAR24* at a 5% significance level. However, no significant result was observed when comparing *CAR12* with *CAR36*. In comparison, the test results from *BHAR*, as reported in Tables 5 and 6, show a significant difference in medians between those of *BHAR12* and *BHAR24* (*BHAR36*), while differences in means are not significant.

Overall, results obtained from testing *CARs* and *BHARs* reveal the existence of significant underperformance after listing in all three holding periods (all indices are less than 0), with stock performance peaking in the first period and then deteriorating in the second holding period. The main result, which revealed that, on average, listing firms underperform in the long run in Vietnam's market, is in line with findings in prior studies by Algharaballi (2013), Ahmad-Zaluki et al. (2011), Teoh et al. (1998a, 1998b), Gajewski and Gresse (2006), Gao et al. (2015), and Perera (2014).

Table 5. Comparison of mean CARs, BHARs (results based on matched-pairs t-test)

Variable	т	H1 — Alternative hypothesis					
variable	1	p-value mean (diff) < 0	p-value mean (diff) = 0	p-value mean (diff) > 0			
CAR							
CAR12 and CAR24	2.2211	0.9861	0.0278	0.0139			
CAR12 and CAR36	0.6908	0.7547	0.4907	0.2453			
BHAR							
BHAR12 and BHAR24	0.9837	0.8366	0.3267	0.1634			
BHAR12 and BHAR36	0.5899	0.7220	0.5561	0.2780			

Variable	Positive rank	Negative rank	p-value	Z-score
CAR				
CAR12 and CAR24	92	69	0.0388	2.067
CAR12 and CAR36	79	82	0.6602	0.440
BHAR				
BHAR12 and BHAR24	99	62	0.0946	1.672
BHAR12 and BHAR36	96	65	0.0983	1.653

Table 6. Comparison of median CARs, BHARs (results based on Wilcoxon signed-rank)

Note: Positive ranks mean the variable former was greater than the variable latter.

4.3. Testing the effect of earnings management in the pre-listing on subsequent stock performance

Both results from the first and second hypotheses indicate that firms listed on HOSE manage their earnings upward in the pre-listing year to meet listing requirements and these firms significantly underperform in the long run after listing. Therefore, this section of the study investigates the relationship between earnings management and stock performance. Four univariate cross-sectional regressions are used to test H3. The dependent variable is stock performance, measured by CAR_{id} and $BHAR_{it}$ for three holding periods. The independent variables are earnings management, measured by *DCA* and *DCA* (*CFO*) in the pre-listing year.

In addition, to address the potential bias in stock performance attributed to firm-specific characteristics and other cross-sectional influences, multiple control variables are incorporated into the models: firm size (Gill et al., 2013; Gong et al., 2008; Kamel, 2012; Kao et al., 2009; Mangala & Dhanda, 2019; Premti, 2013); offering size (Cai et al., 2008; Gill et al., 2013; Mangala & Dhanda, 2019; Thomadakis et al., 2012), firm liquidity (Gill et al., 2013), leverage (Eckbo & Norli, 2005; Gao



et al., 2015; Gill et al., 2013; Kao et al., 2009), audit quality (Gao et al., 2015; Gill et al., 2013; Kao et al., 2009; Su & Bangassa, 2011; Tran et al., 2019), liqtrade (Chen et al., 2010; Eckbo & Norli, 2005; Gao

Model 1

$$CAR_{i} = DCA_{i (pre-listing)} + NDCA_{i (pre-listing)} + Ofsize_{i} + Size_{i,t} + Liq_{i,t} + Lev_{i,t} + Liqtrade_{i} + \Delta NI_{i,t} + B/M_{i,t} + Audit_{i} + Ind_{i} + Year_{i}$$
(8)

Model 2

 $BHAR_{i} = DCA_{i (pre-listing)} + NDCA_{i (pre-listing)} + Ofsize_{i} + Size_{i,t} + Liq_{i,t} + Lev_{i,t} + Liqtrade_{i} + \Delta NI_{i,t} + B/M_{i,t} + Audit_{i} + Ind_{i} + Year_{i}$ (9)

Model 3

$$CAR_{i} = DCA(CFO)_{i (pre-listing)} + NDCA(CFO)_{i (pre-listing)} + Ofsize_{i} + Size_{i,t} + Liq_{i,t} + Lev_{i,t} + Liqtrade_{i} + \Delta NI_{i,t} + B/M_{i,t} + Audit_{i} + Ind_{i} + Year_{i}$$
(10)

Model 4

 $BHAR_{i} = DCA(CFO)_{i (pre-listing)} + NDCA(CFO)_{i (pre-listing)} + Ofsize_{i} + Size_{i,t} + Liq_{i,t} + Lev_{i,t} + Liqtrade_{i} + \Delta NI_{i,t} + B/M_{i,t} + Audit_{i} + Ind_{i} + Year_{i}$ (11)

where,

• DCA_i (*pre-listing*) — discretionary current accruals of listing firm *i* from current accruals model in the fiscal year prior to listing;

• $NDCA_i$ (*pre-listing*) — non-discretionary current accruals of listing firm *i* from current accruals in the fiscal year prior to listing;

• $DCA(CFO)_{i (pre-listing)}$ — discretionary current accruals of listing firm *i* from the cashflow model in the fiscal year prior to listing;

• $NDCA(CFO)_{i (pre-listing)}$ — non-discretionary current accruals of listing firm *i* from the cashflow model in the fiscal year prior to listing;

• *Ofsize*_{*i*} — natural logarithm of issue amount is taken as offer size;

• $Size_{i,t}$ — natural logarithm of total assets firm *i* in the listing year;

• $Lev_{i,i}$ — the book value of total debts of firm *i* divided by total assets in the listing year;

• *Liq*_{*i*} — the value of current assets of firm *i* divided by current liabilities in the listing year;

• Ind_i — dummy variables firm *i* belongs to an industry;

• *Year*_i — listing year dummy variables to control the year effect;

• *Liqtrade*_{*i*} — the liquidity of a stock, is measured by the volume traded of the stock divided by the number of shares outstanding of firm i;

• $\Delta N I_{i,t}$ — change of net income divided by beginning total assets of firm *i*;

• B/M — book to market value of firm *i* in year *t*, calculated by dividing the market capitalization by the book value;

• *Audit*_{*i*} — dummy variable, equal 1 if the firm *i* is audited by a Big 4 in year *t* and 0 otherwise.

4.4. Main regression results

et al., 2015; Kamel, 2012).

To investigate whether earnings management in the pre-listing year causes poor stock performance, ordinary least squares (OLS) were conducted by using Stata 13 to estimate the parameter values. Additionally, the existence of outliers, which are data points that differ significantly from others, can lead to important changes in substantive conclusions regarding relationships among variables (Aguinis et al., 2013). Outliers can reduce the chances of detecting significant differences (Cousineau & Chartier, 2010), and ultimately lead to false acceptance or rejection of hypotheses (Bollen & Jackman, 1985). Therefore, it is necessary to define, identify, and handle outliers in this research. In order to identify influential observations on all regression coefficients as a whole, the difference in fits (DFITS) values were predicted from models to explore sensitivity to exclude outliers, with no effect on direction and magnitude of effect, or statistical significance (Welsch, 1986). Hence, to mitigate the influence of outliers, specific observations were eliminated from the dataset (Behmiri & Manera, 2015; Blažková & Dvouletý, 2018; Osborne & Overbay, 2004).

et al., 2015), changes in net income asset-scaled (Gao

et al., 2015; Shen et al., 2014; Teoh et al., 1998a,

1998b), book-to-market ratios (Brav et al., 2000; Gao

Table 7 illustrates the result of testing *H3*, which examines the relationship between earnings management in the pre-listing year (*DCA*) and longrun stock performance (*CAR*, *BHAR*) for three holding periods. The correlation coefficients are negative and significant at the 1% level in the *CAR12*, and *CAR36* models, at the 5% level in the *BHAR36* model, and the 10% level in the *CAR24*, *BHAR12*, and *BHAR24* models. These results suggest that firms with higher *DCA* in the pre-listing year were associated with poorer long-run stock performance.

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Regressor	CAR12	CAR24	CAR36	BHAR12	BHAR24	BHAR36
DCA	-0.3820***	-0.3122*	-0.6093***	-0.2089*	-0.3923*	-0.4114**
DCA(pre-listing)	[0.1226]	[0.1717]	[0.2014]	[0.1203]	[0.2012]	[0.1934]
NDCA	0.3368	0.6286	-0.0409	0.2870	0.2723	0.1139
NDCA _(pre-listing)	[0.3911]	[0.4565]	[0.4959]	[0.3696]	[0.4982]	[0.5802]
Ofeiza	0.0886	0.0085	-0.1355	0.0385	-0.0887	-0.1981
Ofsize	[0.0701]	[0.0914]	[0.1256]	[0.0681]	[0.1071]	[0.1363]
Cino	-0.1172	-0.0848	0.0712	-0.0596	0.0097	0.0845
Size	[0.0760]	[0.0952]	[0.1214]	[0.0717]	[0.1018]	[0.1329]
Lia	0.0227	0.0336**	-0.0086	0.0354**	0.0166	0.0137
LIQ	[0.0153]	[0.0167]	[0.0207]	[0.0159]	[0.0261]	[0.0201]
Lev	0.0170	0.0083	-0.0241	0.0146	-0.0158	-0.0120
	[0.0175]	[0.0237]	[0.0622]	[0.0165]	[0.0319]	[0.0766]
ANI	-0.7875	-1.3373	-0.1394	-0.4474	0.3527	-0.7479
ΔΙΝΙ	[0.7838]	[0.9051]	[0.9460]	[0.6499]	[0.9349]	[1.0071]
Liatrada	(1.2498)	-0.5611	1.711	-0.7794	-0.5383	-2.5506
Ligiruue	[1.3917]	[1.5228]	[2.4599]	[1.2595]	[2.2790]	[2.7069]
P/M	-0.0336	0.1958**	0.2112*	-0.1125	0.0575	0.0617
D/ M	[0.0759]	[0.0837]	[0.1073]	[0.0793]	[0.0990]	[0.1364]
Audit	0.0458	0.1546	-0.0072	0.0298	0.0857	0.0800
Αμμη	[0.0786]	[0.1096]	[0.1440]	[0.0709]	[0.1225]	[0.1250]
Year	Yes	Yes	Yes	Yes	Yes	Yes
Ind	Yes	Yes	Yes	Yes	Yes	Yes
00100	0.7300	1.2937	0.8242	0.3472	1.025	1.3982
_cons	[0.7562]	[0.9213]	[1.1176]	[0.6482]	[0.9937]	[1.2490]
Ν	149	146	147	148	149	146
R-square	0.288	0.471	0.370	0.332	0.449	0.388
p-value	0.0001	0.0000	0.0000	0.0001	0.0000	0.0000

Table 7. Regression analysis of earning management (DCA) and post-issue stock performance (CAR, BHAR)

Note: * p < 0.10, ** p < 0.05, *** p < 0.01; all values in the above table are reported after excluding these outliers.

Table 8. Regression analysis of earning management (DCA (CFO)) and stock performance (CAR, BHAR)

Regressor	CAR12	CAR24	CAR36	BHAR12	BHAR24	BHAR36
	-0.3893***	-0.2940*	-0.4382*	-0.2781**	-0.3610**	-0.3733*
$DCA(CPO)_{(pre-listing)}$	[0.1404]	[0.1665]	[0.2296]	[0.1204]	[0.1757]	[0.1990]
NDCA(CEO)	-0.2452	-0.4560*	-0.8546**	-0.1976	-0.6442***	-0.7207**
$NDCA(CFO)_{(pre-listing)}$	[0.1840]	[0.2430]	[0.3738]	[0.1612]	[0.2101]	[0.3244]
Ofeiza	0.0595	-0.0012	-0.1249	0.0376	-0.1269	-0.2365*
Ojsize	[0.0806]	[0.0875]	[0.1355]	[0.0680]	[0.1152]	[0.1363]
Size	-0.0898	-0.0690	0.0395	-0.0591	0.0463	0.1209
3120	[0.0880]	[0.0856]	[0.1273]	[0.0715]	[0.1102]	[0.1311]
Lia	0.0279*	0.0489***	-0.0063	0.0372**	0.0186	0.0171
LIQ	[0.0154]	[0.0110]	[0.0265]	[0.0147]	[0.0219]	[0.0198]
Lay	0.0186	0.0029	-0.0188	0.0047	-0.0323	-0.0245
Lev	[0.0371]	[0.0239]	[0.0546]	[0.0145]	[0.0263]	[0.0788]
ANT	-1.0219	-1.9183**	-0.2265	-0.7826	-0.0838	-1.3218
	[0.8029]	[0.7371]	[1.1009]	[0.6488]	[1.0163]	[1.0433]
Liatrada	-1.4164	0.2142	1.6783	-1.2291	-0.2071	-2.0289
Ligtrade	[1.3144]	[1.5099]	[3.0946]	[1.1193]	[1.4946]	[2.5661]
R/M	-0.0534	0.1532*	0.1676	-0.1419*	0.0286	0.0237
B/M	[0.0768]	[0.0790]	[0.1112]	[0.0754]	[0.0893]	[0.1273]
Audit	0.0424	0.0834	0.0388	0.0256	0.0616	0.0664
Auun	[0.0801]	[0.1057]	[0.1462]	[0.0700]	[0.1116]	[0.1213]
Year	Yes	Yes	Yes	Yes	Yes	Yes
Ind	Yes	Yes	Yes	Yes	Yes	Yes
2000	0.7013	1.2845	1.3622	0.4421	1.0371	1.4173
_cons	[0.7775]	[0.7830]	[1.1728]	[0.6404]	[0.9031]	[1.2191]
Ν	149	146	148	148	151	146
R-square	0.285	0.499	0.353	0.350	0.366	0.390
p-value	0.0002	0.0000	0.0001	0.0000	0.0000	0.0000

Note: * p < 0.10, ** p < 0.05, *** p < 0.01; all values in the above table are reported after excluding these outliers.

By comparison, Table 8 provides the results of cross-sectional regressions of long-run stock return performance on earnings management, where earnings management was measured by *DCA (CFO)*. Consistent with the previous findings in Table 7, the coefficient estimates of *DCA (CFO)* are all negatively related to the subsequent stock returns *CAR*, and *BHAR* for all holding periods at 1%, 5% and 10% levels. These findings align with expectations and provide support for *H3*.

5. CONCLUSION

This study examines the role of earnings management in the pre-listing year in the Vietnamese Stock Market. By adopting two models including the current accruals model and cash flow current accruals model, the findings suggest that, on average, newly-listed companies on HOSE aggressively manage earnings upwards in the year before listing. Confirming earlier studies by Teoh et al. (1998a, 1998b), Dechow and Dichev (2002), Athanasakou et al. (2009), Ahmad-Zaluki et al. (2011), Algharaballi



(2013), Gao et al. (2015), Nguyen and Duong (2021), the results in this study suggest that managers have used current discretionary accruals to inflate earnings in the pre-listing year to meet the listing requirements on HOSE.

Consistent with existing international evidence, the results obtained from testing long-run stock performance demonstrate that newly listed firms have underperformed in the long run after listing, as shown by a consistent fall in the mean and median cumulative abnormal returns and buy-and-hold abnormal returns across the three holding periods. Moreover, this study provides further evidence supporting the view that earnings management in the year before the listing is reliably and negatively associated with stock returns throughout the three holding periods.

These findings have important implications for and contributions to various parties and the literature. First, by empirically examining the role of earnings management in Vietnam a developing country, this paper contributes to the wider issue that discretionary current accruals are more flexible than non-current accruals as seen in their frequent occurrence and higher degree of judgment involved in their estimation (Nguyen & Duong, 2021; Athanasakou et al., 2009). Second, for investors, it is crucial to exercise caution when observing a high magnitude of earnings before the listing and the performance of newly-listed firms. It is advisable to be discreet when considering investing in stocks of newly-issued firms. Third, for the policymakers, the findings from this study inform policymakers that they need to reinforce their judiciary powers and improve the quality of financial reporting to reduce the level of information asymmetry. Finally, for auditors, auditors should be more cautious when auditing newly issued firms with a high magnitude of current discretionary accruals.

Despite the overall contributions, the findings of this study should be interpreted while taking into account the following limitations. First, this study is limited to a sample from Vietnam. Therefore, future research should examine generalizations of the findings beyond Vietnamese firms. Second, due to the difficulty of getting data, this study examines earnings management in only one year prior to listing and the post-listing long-run performance in the span of three years. As a result, the duration of time considered in this study might be insufficient for listing companies to fully disclose their characteristics.

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