



EARNINGS MANAGEMENT IN IPO BOUND FIRMS: EVIDENCE FROM INDIAN SME EXCHANGES



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ABSTRACT

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We study earnings management in IPO-bound SME firms that are raising equity capital on the SME exchanges in India. SME exchanges in India are recently incorporated, privately regulated, and have restricted market participation. Managerial decisions such as earnings management influence a firm's stock performance. In an emerging economy like India with underdeveloped financial markets for SMEs, earnings management also impacts the long-term sustainability of a nascent financing market at an early stage of its development. We find IPO-bound firms on the SME exchanges resort to a higher degree of earnings management vis-à-vis the Main Board IPO-bound firms. The earnings management in SME firms has a negative impact on their stock performance after listing. The evidence of an adverse relationship with the stock performance suggests that earnings management reduces investors' protection. The reduction in investors' protection may act as a challenge to the sustainable development of SME exchanges to meet financing needs of the SME sector in India and its emergence as a credible alternative to bank financing.

Contribution/ Originality: This is the first study that examines the earnings management phenomenon in the IPO bound firms of the Indian SME exchanges. The paper provides vital inputs to policymakers and market participants for sustainable development of a dedicated SME-focused equity platform in an emerging economy.

1. INTRODUCTION

1.1. SME Sector and Indian Economy

Small and Medium Enterprises (SME) sector plays a significant role in the global economy. SMEs employ around two-thirds of the formal workforce in OECD countries (Dietrich, 2012). They are also the most significant contributor to the pool of new jobs that are generated. According to the European Commission, the number of jobs attributed to MSMEs increased by an annual average of 1.9 per cent during 2002-2008, compared with 0.8 per cent for large enterprises.

In India, SMEs contribute 30% of Gross Domestic Product (GDP) and 33% of the Gross Value Added (GVA). The Manufacturing SMEs contribute close to third of the total manufacturing output. In fact, the manufacturing MSMEs account for 45% of the total exports from the country. (Source: Annual Report 2016-17, Ministry of Micro, Small and Medium Enterprises, Government of India)

A recent study carried out by Mastercard¹, titled 'Micro Merchant Market Sizing and Profiling Report' claims small businesses make up for 45% of India's GDP, around three times of what Corporate India contributes. The sector employs close to 460 million people and is growing at 11.5% annually.

However, the SME sector in India suffers from a number of issues; the most prominent is the constrained access to growth financing.

1.2. SME Financing and SME Exchanges in India

Developing nations such as India suffer from underdeveloped financing system. The problem becomes particularly acute for small and medium enterprises. A key growth constraint for the SME sector in emerging economies is the over-reliance on bank financing and absence of credible alternate financing channels. The policymakers are evaluating ways to develop alternative sustainable financing platforms to bridge this gap. One way to facilitate this is to provide an SME exclusive exchange. The primary objective of incorporating SME exchanges is to encourage SME firms to raise growth capital from the public at large. This alternate source of growth capital overcomes the critical gap of bank financing for the SME sector in India. Sustainable development of these SME exchanges may provide a durable solution for the financing constraint of a developing economy like India.

In India, the Prime Minister's Task Force on Medium, Small & Medium Enterprises (MSMEs) in its report dated January 2011 identified "inability to raise equity/risk capital" and "heavy tilt of financing mix towards bank debt" as critical constraints for the growth of MSMEs. The task force recommended setting up of SME exchanges in India.

India has seen the emergence of Bombay Stock Exchange (BSE) SME and National Stock Exchange (NSE) EMERGE platforms in the last few years. The development of these SME exchanges has helped some SMEs in raising equity risk capital directly from individual investors.

1.3. The Regulatory Framework of SME Exchanges

The stock exchanges across all economies are subject to broadly three types of regulatory frameworks. The major exchanges such as NYSE, LSE et al. are subject to centralised regulatory framework characterised by a set of stringent and inflexible regulations and compliance requirements. At the other end of the regulatory spectrum lie unorganised stock exchanges such as Pink Sheets in the USA that are entirely unregulated. Somewhere in between lie stock exchanges that are primarily self-regulated and have low compliance requirements. The most prominent example of the last type is the London Stock Exchange's Alternative Investment Market (AIM) exchange. SME exchanges in India broadly follow AIM's footsteps on the regulatory front and are "lightly regulated" compared to the main boards of BSE and NSE.

We summarise key differences in the regulatory framework of SME exchanges and Main Boards of BSE and NSE in Annexure 1.

The lighter regulatory and compliance regime reduce the cost of listing for SME firms and the cost of raising capital. This improves the viability of these SME firms and ensures sustainable development of SME exchanges. However, the light regulatory and compliance framework may motivate the management of these SME firms to exploit investors by depicting an incorrect picture of the business.

1.4. Discretionary Accruals and Earnings Management in IPO-Bound SME Firms

Discretionary accruals are an essential and indispensable part of the management accounting of a firm. [Dechow and Skinner \(2000\)](#) mention that as long as firm managers are not committing fraud, managers can use

¹<http://www.businessinsider.in/Indian-SMEs-contribute-45-to-countrys-GDP-Report/articleshow/52864199.cms> accessed on 31 July 2018

discretionary accruals under generally accepted accounting principles (GAAP) to adjust results to their benefit. We define Earnings Management as those discretionary accruals that lead to reversible changes in the reported earnings.

Our analysis concludes that IPO-bound firms on SME exchanges resort to a higher level of earnings management than IPO-bound firms on the Main Boards. We also find that the underlying discretionary accruals reverse in the period immediately after listing.

1.5. Earnings Management, Stock Returns, and Investor Protection

We find that earnings management in IPO-bound SME firms adversely impacts their stock performance in the post listing period on SME exchanges. This is in line with findings of most of the research in this area for the stock exchanges in different countries.

Leuz *et al.* (2003) find that the earnings management leads to a decrease in the investor protection. We conclude that SME exchanges offer inferior investor protection given a higher level of earning management. The Indian government established SME exchanges to provide SME firms with an equity channel for financing, thereby providing an alternative to existing bank debt financing. In their nascent growth phase, the perception of lower investor protection on the SME platform, compared to the Main exchanges, will drive away potential investors. Such a development will hamper the growth of the SME exchanges and requires urgent redressal.

In this research, we investigate the role of a managerial action (read earnings management) in a firm's stock return and long-term sustainability of a nascent and developing dedicated financing markets in a developing market context. We have two motivations to select SME exchanges in India. First, there is now a sufficient body of meaningful data available for firms listed on SME exchanges. Second, India offers a unique blend of being a developing nation with underdeveloped financial markets. This research contributes meaningfully to answer – *To what extent the regulatory and compliance framework in dedicated financing platforms be diluted to attract firms and investors without compromising their sustainable development?*

The remainder of the paper is structured as follows: Section II provides the literature review of the studies that have been done in the past, followed by Section III which presents information on the SME stock exchanges for the study period covering the period between April 2012 and March 2017. Section IV explains the research data and methodology. Empirical findings of the study and the conclusion are covered in Section V and Section VI respectively.

2. LITERATURE REVIEW

2.1. Earnings Management

Firms publish financial statements to provide essential information about their business. Investors use these financial statements to assess the health of the firms. They prefer firms that report a consistent pattern of earnings growth, which results in such firms trading at higher price-to-earnings multiples (Barth *et al.*, 1999). The investors' preference for such firms continues as long as these firms sustain the trend of increasing earnings. DeAngelo (1988) find that firms that report a disruption in the pattern of consistent earnings growth lose an average 14% of their stock value in the year of the disruption of the pattern. As a result, firms have the incentive to present better looking financial numbers to investors by reporting consistent earnings growth. Burgstahler and Dichev (1997) find evidence that firms manage earnings to avoid reporting losses and decreased earnings.

There are two perspectives of earnings management - the opportunistic perspective and the signalling or informational perspective (Ben Amar *et al.*, 2018; Ben Amar and Chakroun, 2018). Under the opportunistic perspective of earnings management, managers use earnings management to maximise their wealth at the expense of a firm's stakeholders. They are driven by a desire to (a) maximise their bonus compensation (b) avoid breaching

of debt covenants. Under a signalling perspective of earning management, the managers use earnings management to signal a more favourable narrative of a firm's prospects to the outside world.

2.2. Earnings Management and Corporate Governance

Corporate governance practices affect the firm's earnings management. [Leuz et al. \(2003\)](#) study the link between earnings management and investor protection. They conclude in countries with developed equity markets, dispersed ownership structures, strong investor rights, and legal enforcement; firms engage in lesser degree earnings management. They argue that in countries with reliable and enforced investor protection, the insiders have less incentive to manage earnings since there is very little that is hidden from the outsiders.

[Xie et al. \(2003\)](#) find that board and audit committee composition has a direct bearing on the likelihood of firms engaging in earnings management. Firms, where committee members have corporate or financial backgrounds, see lesser discretionary current accruals. [Abbadi et al. \(2016\)](#) study the impact of the quality of corporate governance on earnings management in an emerging economy. They find that earnings management is affected negatively by corporate governance quality.

2.3. Earnings Management in IPO-Bound Firms

When a firm decides to go public, it reveals its financial information to the public at large for the first time. Firms would showcase their best financial health to enhance investor's confidence in the firm's future and maximise the firm's valuation while raising funds from the public. [Jain and Kini \(1994\)](#) point out that managers attempt earnings management before going public. They provide the evidence of earnings management by studying the decline in the post-issue operating performance of IPO firms. Since investors are aware of this phenomenon, one expects that they would adjust their expectations of the firm's performance post listing. However, [Loughran and Ritter \(1995\)](#) find that the decline in operating performance is unanticipated and investors are surprised by the poor performance of IPO firms. The investor reaction suggests that they continue to have high expectations from the recently listed firms. [Massel et al. \(2017\)](#) demonstrate that firm managers report revenues opportunistically in the fiscal year just before the IPO since investors value the firm revenues. They find that these pre-IPO firm financial statements are more likely to be subsequently restated.

In contrast, [Ball and Shivakumar \(2008\)](#) find no evidence of earnings management. They argue that the IPO process involves greater monitoring and scrutiny from different stakeholders, thereby improving the quality of the reported earnings of firms.

Previous literature on the earnings management of IPO bound firms presents mixed views. Researchers find evidence of earnings management in different markets. [Shen et al. \(2014\)](#) find evidence that firms resort to a significant amount of earnings management as investors take the accounting accruals at face value. [Gulec et al. \(2016\)](#) study the Turkish firms that went public between 2011 and 2015. They find that discretionary accruals are highest in the IPO year. [Wang et al. \(2018\)](#) find that Chinese firms that are backed by government-controlled venture capital firms engage in a higher level of earnings management before the IPO.

However, some studies do not find any evidence of earnings management for the IPO bound firms. [Dritsakis et al. \(2004\)](#) find that earning management is not popular among IPO bound firms in Greece. They find that earnings management accrues no benefits as the market tends to anticipate the earnings management behaviour and classifies these firms into higher risk classes. [Kamel \(2012\)](#) find that Egyptian IPO bound firms are unlikely to overstate their earnings before the IPO date.

Institutional investors are seen to ensure high levels of corporate governance in the firms they are invested. These investors play a monitoring role over firms, thereby reducing the earnings management in financial reporting. However, [Lo et al. \(2017\)](#) find that institutional investors have incentives to opportunistically maximise their wealth by manipulating earnings when firms engage in IPOs. Firms with high institutional ownership

experience superior post-IPO stock returns and operating performance, as institutional investors restrain earnings management after the stock issuance.

Accrual-based earnings management is not restricted to IPOs but is also present for seasoned equity offerings (SEO). Cohen and Zarowin (2010) find that firms use accrual-based earnings management around SEOs. They use the firm's returns on assets (ROA) and find that SEO firms outperform their industry peers in the period preceding the SEO but underperform their peers following the SEO.

2.4. Earnings Management in Smaller Firms

Hall *et al.* (2000) argue that the closed nature of smaller firms makes information asymmetry problem severe for such small firms. The higher information asymmetry is expected to result in a higher level of earnings management for smaller firms. Gao *et al.* (2015) mention that detailed and uniform accounting information about SMEs is not available readily, resulting in information asymmetry for the SMEs. In the light of the less stringent listing requirements and promising prospects after listing, they believe that SME issuers have a higher motivation to take advantage of the information gap and manipulate earnings.

Li *et al.* (2006) find the smaller and the less recognised firms carry more aggressive earnings management. Gerakos *et al.* (2013) investigate the firms who raise equity capital on the Alternative Investment Market (AIM) platform of the London Stock Exchange (LSE). They find that the companies getting listed on the AIM platform have high pre-listing discretionary accruals, which reverses post-listing. The reversal supports the contention that smaller firms resort to more earnings management before listing. The lesser stringent regulations for the AIM-listed companies tend to help these companies in this process. Alhadab *et al.* (2016) in their study of LSE and AIM listed companies find that the firms listed on the AIM platform have higher sales based and accrual-based earnings management compared to the main LSE board companies. Zhou (2017) study the Chinese Growth Enterprise Market (GEM) and find that firms supported by venture capital institutions have stronger earnings management before the IPO. Collectively these papers support the evidence that smaller firms engage in a higher level of earnings management.

2.5. Earnings Management and Stock Performance Post Listing

Earnings management has negative implications for the long-run performance of IPOs. Teoh *et al.* (1998) believe that IPO bound firms report higher earnings through positive discretionary accrual adjustments. Investors believe the reported earnings number and bid higher for shares in the IPO, assuming better growth prospects for the firm. As the investors realise the real information about the firm over subsequent reporting periods, they are disappointed, leading to price correction. Over the three-year holding period, they show that aggressive users of discretionary accruals underperform conservative users of discretionary accruals by 20%.

Shen *et al.* (2014) find that three-year stock performance post listing deteriorates, with a worse performance for firms with higher managed accruals. Gao *et al.* (2015) find that earnings management effected through income increasing accruals results in poorer long-term stock performance for firms. Shette *et al.* (2016) show that the managers engage in opportunistic earnings management by selecting positive accruals that report higher earnings in the IPO year. Such opportunistic earnings management in IPO-year has a significant adverse impact on the long-term adjusted earnings and market performance, resulting in a long-term negative stock return performance.

Secondary equity offerings (SEO) are similar to initial public offerings (IPO), with the only difference that the price of the new shares issued depends on the existing market price of the shares. Har and Visvanathan (2018) find that misvaluation at the time of SEO results in long run stock underperformance. They do point out that the underperformance is the firm's own doing in the form of earnings management.

Some researchers find that earnings management in the pre-IPO period results in stock underperformance post-listing. As firms reverse the pre-IPO positive discretionary accruals, stock prices fall on the back of deteriorating operating performance.

3. SME STOCK EXCHANGES OVERVIEW

To attract investors with capital at one end and firms that require capital on the other end, SME focused equity platforms have lower listing requirements and lesser listing cost than the Main Board. However, two drivers are necessary to ensure sustainable development of SME dedicated financing markets - (a) benefits accrued to an SME must outweigh the costs associated with accessing these SME dedicated financing markets; and (b) the dilution in regulatory and compliance framework should not lead to deterioration in investor protection.

Several Equity platforms around the world have proved successful for the SMEs: Alternative Investment Market (London), TSX Venture (Canada), HK GEM (Hong Kong), Mothers (Japan), Alternext (Europe) and AltX (South Africa) are few of the examples. India too has seen the success of SME focused equity platforms viz. BSE SME and NSE EMERGE. Both platforms launched in 2012, have more than 200 companies that have raised money on these platforms.

Table-1. Overview of the money raised and subscription level of SME IPOs in India

		Count	Money Raised, mn	IPO Subscription (times)		
				Avg	Min	Max
FY 2013	Total	27	63,440	2.98x	1.02x	34.11x
	Main Board	10	61,790	5.84x	1.02x	34.11x
	SME Board	17	1,650	1.30x	1.04x	1.93x
FY 2014	Total	34	14,632	1.63x	0.94x	9.08x
	Main Board	2	11,901	5.39x	1.70x	9.08x
	SME Board	32	2,731	1.40x	0.94x	2.46x
FY 2015	Total	42	15,509	4.60x	0.65x	51.21x
	Main Board	6	13,099	23.79x	0.99x	51.21x
	SME Board	36	2,410	1.40x	0.65x	3.07x
FY 2016	Total	70	134,973	4.91x	0.72x	52.82x
	Main Board	24	131,943	11.16x	0.97x	52.82x
	SME Board	46	3,030	1.66x	0.72x	6.82x
FY 2017	Total	102	253,976	10.66x	1.05x	82.25x
	Main Board	26	246,511	25.01x	1.31x	81.63x
	SME Board	76	7,465	5.76x	1.05x	82.25x

Note: FY 2013 refers to the financial year from 1 April 2012 to 31 March 2013.

Between April 2012 and March 2017, in all 276 companies were listed on the Indian equity markets. The total amount of capital raised by the 276 companies was INR 482.6 billion. 208 companies on the SME platform raised INR 17.4 billion while the 68 companies on the Main platform raised INR 465.2 billion.

When companies list on the Main Board, they can choose to list only on BSE or NSE or both NSE and BSE simultaneously. In the current sample, the companies on the Main Board simultaneously listed on NSE and BSE. In case of the SME board, the companies wanting to list have to choose either the BSE SME or the NSE EMERGE platform. Current regulations do not allow simultaneous listing on the BSE SME and the NSE EMERGE platform.

4. DATA & METHODOLOGY

We source the data from PROWESS, a database compiled by the Centre for Monitoring Indian Economy (CMIE), Red Herring Prospectus (RHP) filed with the regulator SEBI, the Bombay Stock Exchange (BSE), and the National Stock Exchange (NSE). The sample includes all the firms who raised money on the Main and SME boards of BSE and NSE between April 2012, and March 2017.

4.1. Quantification of Earnings Management

The study investigates earnings management through the discretionary accruals around the IPO for the firms that raised money on the SME exchange. We first compute the total accruals associated with the firms at the time of the IPO. We follow the steps outlined in Gerakos *et al.* (2013) for computing the total accruals based on equation (1)

$$\text{total accruals} = (\Delta\text{total current assets} - \Delta\text{cash}) - (\Delta\text{total current liabilities} - \Delta\text{short term debt} - \Delta\text{taxes payable}) - \text{depreciation expense} \dots\dots\dots(1)$$

All “Δ” values are the difference between the current year value and the previous year value of the respective accounting variables. We standardise the variables by dividing all the variables with the previous year’s total assets. We use the variable definitions as available with CMIE PROWESS Database. We adopt a similar approach to Gerakos *et al.* (2013) for treating the missing values of short-term debt and taxes payable as zero.

The total accrual computed according to equation (1) is composed of (a) discretionary accrual – unusual changes in the working capital Assets & Liabilities (b) non-discretionary accrual – regular changes in the working capital Assets & Liabilities during business. Firms manage accruals to manipulate accounting reports opportunistically. However, Kaplan (1985) states that accruals arising in the ordinary course of business, i.e. non-discretionary accrual do not reflect opportunistic managerial behaviour. Any manipulation of accounting information is through the discretionary accruals. Hence, the focus of our study is the discretionary accruals that management may selectively accrue to project better earnings in the run-up to the IPO.

Using the approach of Gerakos *et al.* (2013) & Ball and Shivakumar (2008) we estimate the regular non-discretionary accruals using the regression equation (2).

$$\text{Accruals}_{i,t} = \beta_0 + \beta_1 * \text{InverseTotalAssets}_{i,t} + \beta_2 \Delta\text{Sales}_{i,t} + \beta_3 \text{FA}_{i,t} + \beta_4 \text{CFO}_{i,t} + \beta_5 \text{DCFO}_{i,t} + \beta_6 \text{DCFO}_{i,t} * \text{CFO}_{i,t} + \epsilon_{i,t} \dots\dots\dots(2)$$

Where:

$\Delta\text{Sales}_{i,t}$ is the change in sales for the firm “i” in the year “t” over the previous year

$\text{FA}_{i,t}$ is the book value of the fixed assets for the firm “i” in the year “t”

$\text{CFO}_{i,t}$ is the operating cashflow for the firm “i” in the year “t”

$\text{DCFO}_{i,t}$ is a dummy variable that takes value “1” is operating cashflow for the firm “i” in the year “t” is negative and “0” otherwise.

Once the regular or non-discretionary accruals are fitted using the regression above, the discretionary accruals are the difference between the actual total accrual [computed using equation (1)] and estimated total accrual [computed using equation (2)].

$$\text{DiscAccruals}_{i,t} = \text{Accruals}_{i,t} - [\widehat{\beta}_0 + \widehat{\beta}_1 * \text{InverseTotalAssets}_{i,t} + \widehat{\beta}_2 \Delta\text{Sales}_{i,t} + \widehat{\beta}_3 \text{FA}_{i,t} + \widehat{\beta}_4 \text{CFO}_{i,t} + \widehat{\beta}_5 \text{DCFO}_{i,t} + \widehat{\beta}_6 \text{DCFO}_{i,t} * \text{CFO}_{i,t}] \dots\dots\dots(3)$$

4.2. Discretionary Accrual and Reversal Analysis

The SME platform has limited oversight of the firms raising money on the platform. Limited oversight provides avenues for the firms to engage in earnings management while raising money from the public investors. The study compares the discretionary accruals around the IPO period for the SME firms with the Main Board firms. The approach is similar to the study of Gerakos *et al.* (2013). Any accruals in one period have to necessarily reverse in the later period. Dechow *et al.* (2012) argue that the reversal of accrual manipulation will occur immediately in the subsequent period. The changes in discretionary accruals and the subsequent reversals are analysed using the equation (4)

$$\Delta DiscAccruals_{i,t} = \alpha_0 + \alpha_1 SME_{i,t} + \alpha_2 Reversals_{i,t} + \alpha_3 Reversals_{i,t} * SME_{i,t} + IndustryEffects + YearEffects + \epsilon_{i,t} \dots\dots\dots(4)$$

$\Delta DiscAccruals_{i,t}$ is the change in the discretionary accrual for a given firm “i”, in the year “t” over the previous year

$SME_{i,t}$ is a dummy variable, “1” if the firm “i” is listed on the SME exchange in the year t, “0” otherwise

$Reversals_{i,t}$ is a dummy variable, “1” if the year “t” is one year after the IPO year for the firm “i”, “0” otherwise.

We hypothesise that firms raising money on the SME platform will have a higher level of positive accruals, in light of the lesser stringent oversight in the SME platform.

Hypothesis H₁: IPO bound firms on SME exchanges will have higher positive accrual compared to IPO bound firms on Main Board i.e α_1 will be positive and significant

Moreover, we expect the accruals to reverse in the subsequent period of listing.

Hypothesis H₂: IPO bound firms on SME exchanges will have a reversal of the accruals in the post listing period i.e α_3 will be negative and significant

4.3. Impact of Discretionary Accrual on Stock Performance

The firms that engage in earnings management during the IPO will see the reversal of accruals in the post listing period. This reversal is most likely to impact the performance of the stock in the post-listing period. We study the impact of earnings management on the 1-year and 2-year windows and also see if the impact is more pronounced for the SME exchange-listed firms. The SME exchanges have a relatively short history. Hence there isn’t sufficient data available to analyse the impact of earnings management on stock performance over the more extended period.

$$StockReturn_i = \gamma_0 + \gamma_1 SME_i + \gamma_2 \Delta DiscAccrual_i + \gamma_3 SME_i * \Delta DiscAccrual_i + \gamma_4 TimeSubscription_i + \gamma_5 Log(TA_i) + \gamma_6 RoE_i + \gamma_7 NonPromoterHolding_i + \gamma_8 InstiNonPromoterHolding_i + \gamma_9 EPSChange_i + \epsilon_i \dots\dots\dots(5)$$

Where

$StockReturn_i$ is the return of the stock over one-year and two-year periods respectively for firm “i”

SME_i is a dummy variable for a listed SME, “1” if the firm “ i ” listed on SME exchange, “0” otherwise

$\Delta DiscAccrual_i$ is the discretionary accrual for the firm “ i ” in the year of IPO

$TimeSubscription_i$ is the number of times of IPO subscription for the firm “ i ”

TA_i is the book value of total assets in the IPO year for the firm “ i ”

RoE_i is the return on equity in the IPO year for the firm “ i ”

$NonPromoterHolding_i$ is the non-promoter holding subsequent to the IPO for the firm “ i ”

$InstiNonPromoterHolding_i$ is the institutional non-promoter holding subsequent to the IPO for the firm “ i ”

$EPSChange_i$ is the change in the earnings per share over the 1-year and 2-year period for the firm “ i ”

The regression analysis uses the Return on Equity (RoE) and EPS Changes as control variables since the stock performance post listing will depend on the operating performance of the firm over the long term. The regression also utilises the non-promoter holding and institutional non-promoter holding as control variables. Higher non-promoter holding signals lack of promoter conviction in the firm while a higher amount of institutional non-promoter holding sends out a positive signal to the market. Size effect is controlled using Total Assets (TA). We expect the change in discretionary accruals of the SME firms to impact their stock performance.

Hypothesis H₃: The change in discretionary accruals of SME firms will impact stock performance in the post listing period i.e. γ_3 will be negative and significant

Table-2. Summary Statistics for the data analysed

SME Platform						
	n	Mean	SD	Min	Median	Max
Time Subscription, times	144	3.6x	9.1x	0.7x	1.4x	82.2x
TA, INR mn	144	560.69	594.27	44.50	353.30	3174.70
DeltaDisc in IPO year	144	0.12	0.43	-1.08	0.10	1.35
OneYRPerf, %	135	63%	124%	-67%	8%	591%
TwoYRPerf, %	84	83%	199%	-84%	18%	1329%
Non-Promoter Holding, %	84	44.4%	19.9%	0.0%	40.0%	79.7%
Institutional -Non Promoter, %	82	1.2%	3.0%	0.0%	0.0%	20.8%
RoE, %	84	7.5%	11.6%	-47.5%	4.0%	48.3%
Main Board						
	n	Mean	SD	Min	Median	Max
Time Subscription, times	60	17.7x	21.9x	1.0x	5.5x	81.6x
TA, INR mn	60	35708.3	78341.4	1303.80	13984.1	486887.4
DeltaDisc in IPO year	60	0.01	0.46	-1.48	0.07	1.11
OneYRPerf, %	57	42%	62%	-65%	24%	190%
TwoYRPerf, %	34	49%	87%	-62%	38%	271%
Non-Promoter Holding, %	35	40.7%	19.0%	10.0%	36.1%	80.0%
Institutional -Non Promoter, %	35	19.8%	13.9%	2.5%	16.4%	62.0%
RoE, %	35	18.1%	22.1%	-13.7%	16.8%	129.3%

Source: CMIE Prowess, NSE and BSE and Author Calculations

5. EMPIRICAL FINDINGS

Table 2 gives the summary statistics of the variables used in our analysis. The 1-year and 2-year performance are on an average lower for the SME listed stocks than the Main Board listed stocks and the difference is statistically significant

5.1. Earnings Management and Reversal

The equation (4) is used to analyse the presence of earnings management through discretionary accruals and the reversal of these accruals in the subsequent period for the firms that raise money. The dummy variables capture these effects in the regression analysis. Table 3 presents the results of the analysis. We show only the relevant variables in the output.

The coefficient of the SME dummy variable is positive [0.026] and statistically significant, in line with our hypothesis H₁. The positive value indicates that the firms are raising money on the SME platform resort to more aggressive discretionary accruals compared to the Main Board firms.

The positive and significant sign for the dummy 'Reversal' variable indicates that the positive accruals continue in the immediate year post the IPO for the Main Board firms. However, in the case of the SME exchange firms, the positive accruals in the pre-IPO period are unwound in the immediate year after the IPO. The evidence for this behaviour is the significant negative coefficient [-0.066] of the interaction term of SME and Reversal dummy variables. Reversal of accruals is as expected in hypothesis H₂.

Table-3. Regression output with change in discretionary accruals as the dependent variable

	Dependent variable
	Delta Discretionary Accruals
SME	0.026* (0.014)
Reversal	0.060** (0.025)
SME: Reversal	-0.066*** (0.029)
Constant	0.764*** (0.021)
Observations	634
R ²	0.895
Adjusted R ²	0.892
Residual Std. Error	0.138 (df = 619)
F Statistic	376.068*** (df = 14; 619)

Note: *p<0.1; **p<0.05; ***p<0.01

Based on the evidence above, we conclude that the firms going for IPO on the Indian SME exchanges resort to earnings management by aggressively managing the discretionary accruals. The level of earnings management is higher for the SME exchange firms, compared to the Main Board firms. These discretionary accruals reverse immediately post listing. These results are in line with findings of Gerakos *et al.* (2013) who studied the companies on the London Stock Exchange (LSE) and Alternative Investment Market (AIM) platform of LSE.

5.2. Impact of Earnings Management on Stock Performance

The higher level of earnings management and subsequent reversal of these accruals on the SME platform is likely to impact the stock performance post listing. The impact on the stock performance post listing is studied using equation (5). We study the 1-year and 2-year stock performance, with discretionary accruals in the IPO year as the independent variable. To distinguish the effect of the SME platform, we employ the interaction term (SME:

DeltaDisc0) of the SME dummy and change in discretionary accrual in the IPO year in our regression. Table 4 presents the results of the analysis. We show only the relevant variables in the output.

The stock performance of the SME listed stocks, represented by the coefficient of the SME variable, is positive after controlling for the changes in promoter holding, size, EPS change and Return on Equity (RoE). Thus, returns on the SME exchange are on average higher post-listing than the Main Board firms after controlling the various factors.

However, the interaction term (SME: DeltaDisc0) is negative and statistically significant for the 1-year post-IPO share performance. In the case of SME firms that exhibit reversal of discretionary accruals in the post-listing period, there is evidence of underperformance of the stock, confirming our hypothesis H₃. The underperformance of the SME firm stocks post listing is in line with the findings of Gerakos *et al.* (2013) and Gao *et al.* (2015). The reversals of the pre-IPO positive accruals in the post-listing period explain the underperformance in the 1-year period. As the firms unwound the positive accruals, the reported earnings of the firms deteriorate, impacting the stock performance. The pre-IPO accruals are higher on the SME platform; hence the reversals are also pronounced, resulting in a higher impact on stock prices of the SME firms.

Table-4. Regression output with stock performance as the dependent variable

	Dependent variable	
	Log (1 + One Year Performance)	Log (1 + Two Year Performance)
SME	0.204 (0.383)	0.45569 0.494
DeltaDisc0	0.377 (0.286)	0.04177 0.401
log(TA)	-0.04 (0.080)	0.14292 0.106
RoE.	1.489*** (0.541)	5.40056*** 1.387
Non.Promoter.Holding	0.504 (0.416)	1.16027** 0.556
Insti.Non.Promoter	-0.845 (0.981)	-4.13358** 1.857
EPSChange	0.0003 (0.011)	0.03738 0.025
SME:DeltaDisc0	-0.817** (0.324)	-0.47788 0.436
Constant	-0.307 (1.065)	-1.91142 1.280
Observations	109	66
R ²	0.192	0.337
Adjusted R ²	0.081	0.2359
Residual Std. Error	0.707 (df = 95)	.7316 (df=53)
F Statistic	1.736* (df = 13; 95)	2.672*** (df= 12;53)

Note: *p<0.1; **p<0.05; ***p<0.01

The Indian government encouraged setup of SME exchanges to provide SME firms access to public equity financing. These SME exchanges are still in their early stages of development. The study found that earnings management for IPO bound firms on the SME exchange is higher than for the Main Board. Leuz *et al.* (2003) mention that earnings management is expected to decrease the investor protection. Xie *et al.* (2003) find that board and audit committee composition has a direct bearing on the likelihood of firms engaging in earnings management. Abbadi *et al.* (2016) provide evidence that earnings management is affected negatively by corporate governance quality.

A higher earnings management on the SME exchange points towards lower investor protection on these platforms. Such perception of lower protection will drive away the investors in this early stage of development of

the exchange. Lack of investors will create the demand side bottlenecks for the SME platform, curtailing the growth of the platform. This will hamper the emergence of SME exchanges as a credible alternative to bank debt in financing SMEs.

Policy makers, sponsors of SME exchanges, and market participants should explore ways to improve quality of financial reporting and control extent of earnings management without incurring substantial costs. One possible solution for the SME platform is the introduction of compulsory IPO grading for SME exchange-listed companies. This is in line with the findings of Cormier *et al.* (2018) who find that firms going public with a credit rating are less likely to engage in income-enhancing accrual-based earnings management in the offering year. In 2006, SEBI introduced compulsory IPO grading for all IPO issues, but the grading was made optional after 2013. Since the regulatory rules for the SME platform are different from the rules applicable to the Main Board, IPO bound firms on the SME exchange should be mandated to have IPO grading. An independent credit rating agency carrying out the IPO grading will improve the quality of reported earnings. Its relevance is more pronounced for “lightly regulated SME exchanges” than the Main Board companies. The government can look at subsidising the cost associated with the IPO grading as part of its efforts to diversify the funding sources for the SMEs.

6. CONCLUDING COMMENTS

Indian SME exchanges offer a unique opportunity to study ways to develop regulatory and compliance regime for a nascent equity financing market in a developing market context. Our analysis suggests that in the backdrop of diluted regulatory and compliance framework, Indian IPO bound SME firms resort to earnings management through discretionary accrual accounting as they prepare to offer their shares to the public on SME exchanges. The degree of earnings management in these IPO bound firms is higher in comparison to the Main Board IPO bound firms. The results are in line with existing literature (Hall *et al.*, 2000; Gerakos *et al.*, 2013) which find that smaller firms are likely to manage earnings more than the large firms.

Further, the earnings management carried out in the IPO year adversely impacts the post-listing performance of the stocks. This implies a lower level of investor protection on these nascent SME stock exchanges. We recommend these nascent stock exchanges and the regulator SEBI to explore cost-light ways to control earnings management of firms that may lead to severe repercussions for the sustainable development of SME exchanges in India.

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Annexure-I. Regulatory regimes for the SME platform and Main Board

Basis of Difference	BSE SME Platform	BSE Main Board
Post-issue paid up capital	The maximum post-issue capital of INR 250 mn	Minimum post issue paid up capital of INR 100 mn
Track Record of Distribution Profits	a) Company to have a three-year track record b) Combined positive cash accruals (earnings before depreciation and tax) from operations for at least two financial years c) Net worth should be positive	a) Minimum of INR150 mn as average pre-tax operating profit in at least three years of the immediately preceding five years b) Net-worth of 10 mn in each of the preceding three full years
Minimum Allottees in IPO	Minimum number of allottees should be 100	Minimum number of allottees should be 1000
IPO Grading	Non- Mandatory IPO Grading	Non -Mandatory IPO Grading
IPO Underwriting	Mandatory (100% underwritten with Merchant Banker underwriting 15%)	Non- Mandatory
Offer Document Approval	Stock Exchange	Regulator SEBI
Listing Fees	The Annual Fees is INR 25,000/- or 0.01% of full market capitalisation, whichever is higher	Fees based on listed capital and starts from INR 2,50,000
IPO Application Size	Minimum of INR 1,00,000/-	INR 10,000 - INR 15,000
IPO Timeframe	Three to Four Months	Six months onwards
Reporting Requirement	Half Yearly	Quarterly
Market Making	Merchant bankers are required to undertake market making for three years.	Not Mandatory
Trading Lot	Minimum lot size of INR 1,00,000/-	No minimum lot size specified

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