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**Earnings Management and Ownership dilution in Small and Medium
Enterprises: Evidence from Indian IPOs**

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Earnings Management and Ownership dilution in Small and Medium Enterprises: Evidence from Indian IPOs

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Abstract

We examine the impact of earnings management and ownership dilution on underpricing, and long-term performance of IPO bound SMEs (Small and Medium Enterprises) in India for a period from 2016 to 2018. We decompose total accruals in discretionary and non-discretionary and further into current and long-term accruals to understand the extent of manipulation around the IPOs. Findings show that there is no significant evidence of earnings management in the previous year or IPO year, but discretionary accruals jump immediately in the next year of IPO. Ownership dilution in promoter's holding explains the underpricing. The regulatory framework for the Issue of Capital and Disclosure Requirements (ICDR) issued by the Securities and Exchange Board of India (SEBI) stipulates that minimum promoters' contribution of 20% of post-issue capital shall be locked-in for three years. Also, an excess of minimum promoters' contribution shall be locked-in for one year. Change in discretionary accruals one year after the IPO shows the impact of regulation as insiders have incentives to manipulate earnings only after one year of IPOs. Issue size, post-issue leverage, and book-to-market ratio explain the long-run performance of shares after listing.

Key Words: IPO, Ownership dilution, SME, Earnings Management

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Introduction

Initial Public Offering is one of the primary sources of financing for firms; it also helps private equity investors and venture capitalists an opportunity to exit from the firms (Pagano & Zingales, 1996; Smith & Sathe, 2011; Bayar & Chemmanur, 2011). Small and medium enterprises (SMEs) not only contribute to economic growth but also provide ample opportunities for employment in emerging countries (Taiwo et al., 2012; Cravo et al., 2012). However, SMEs have limited access to capital through the public equity market because of stringent regulations and therefore rely on term-loans from banks (Casey & Toole 2012; Ryan et al., 2014). The Securities and Exchange Board of India (SEBI), the regulator of capital markets in India, allowed SMEs to sell their shares to the public through IPOs on relaxed norms. Two separate trading terminals – ‘NSE Emerge’ and ‘BSE Sme’ are providing trading facilities in the secondary market for shares of listed SMEs (SEBI-Master Circular, 2010).

Direct and indirect costs, including fees paid to the underwriters, underpricing, and more disclosures, make going public to raise capital very costly to the firms (Bruner & Ramchand, 2004; Changwen, 2006). Allotment of shares to new shareholders at a lower price than the fair price through the IPOs is known as underpricing. Underpricing in IPOs has been extensively studied and remain the focus area in finance literature (Loughran & Ritter, 2004; Ljungqvist, 2007; Lowry & Shu, 2002; Booth & Chua, 1996). Underpricing in IPOs is explained through the Information asymmetry between the potential investors and the insiders in the company (Ritter and Welch, 2002). As insiders (management of the company) have more information about the prospects of the company than the outside investors, therefore, fair valuation of the share prices is not easy for

the potential investors (Lowry & Shu, 2002; Banerjee et al., 2011; Hoque, 2014). To attract new investors and to make the IPO successful firms offer shares at discounts to the investors in the form of underpricing.

IPOs provide an exit opportunity to the existing investors in addition to raise capital for upcoming projects. Full or partial exit by the promoters or by other existing investors sends a negative signal in the market (Bruton, 2009). The market perceives IPOs as either firm already has exhausted its debt capacity/internal capital or firm does not have highly profitable projects. Therefore existing shareholders are not contributing their equity. Ownership dilution magnifies the impact of information asymmetry, and new investor sees IPOs as risky investments. To compensate for this risk, firms have to offer shares at a lower price than the fair price. Therefore, ownership dilution also explains the underpricing (Park & Patel, 2015).

Promoters also try to overstate accounting profits through earnings management before the IPO so that existing investors or firms can sell shares to the public at a higher price. Managers try to exaggerate the accounting profits by using accruals (DuCharme, 2001). Outsiders find it challenging to observe earnings management by analyzing accounting information as some of the accruals are necessary and show the overall state of the company. Separation of nondiscretionary and discretionary accruals is possible only when industry-related information is available (Kim & Ritter, 1999). Usually, such accounting data is disclosed by the firms after three months of the quarter ended. Though it is difficult for the outsiders to reveal the presence of earnings management through discretionary accruals, insiders cannot involve in such practices consistently. In the long-run, managers have to reverse the inflated accruals, and it would hurt the overall performance of the share price of the firm (Teoh et al., 1998; Roosenboom, 2003).

SME sector has been contributing enormously to the development of India. As per the annual report of the Ministry of Micro, Small and Medium Enterprises (2018-19) MSME contributes around 28.9% of GDP, and this sector has grown by 6.43% annually for a period from 2007 to 2016³. This sector contributes heavily to social development as well by creating job opportunities. According to the 73rd national survey, MSME sector has provided 11.10 Crore jobs in rural and urban areas across the country in 2016⁴.

The bond market in India is not very developed, and Indian companies prefer to choose internal financing and bank loans to finance their projects (Raghavan & Sarwono, 2012). Stringent rules to go public make IPOs a costly affair for smaller firms. Given the importance of SMEs for the Indian economy, SEBI, the regulator for capital markets in India, relaxed the norms for SMEs to raise capital from the equity market through IPO. SEBI allowed shares issued by SMEs to trade on separate trading platforms rather than the main board in 2012 (SEBI, ICDR-2009).

This paper examines the role of earnings management and ownership dilution in underpricing and long-term performance of the IPO bound SMEs. This paper examines earnings management practices around IPOs for SMEs, which are having different regulatory framework than the non-SME IPO bound firms. IPOs in SMEs started in 2012, and only a few companies raised capital through public equity offering in the initial phase. The study period from 2016 to 2018 provides a larger sample. Findings show that earnings management through discretionary accruals around IPOs is not significant, but in the next year of IPO, discretionary accruals increase significantly. The regulatory framework for the Issue of Capital and Disclosure Requirements (ICDR) issued by the Securities and Exchange Board of India (SEBI) stipulates that minimum promoters' contribution of 20%

³ Annual Report 2018-19, Ministry of Micro, Small and Medium Enterprises, Government of India.

⁴ MSME Sector Contributes Significantly to Indian Economy, Press Information Bureau, Government of India, Jul 22, 2019

of post-issue capital shall be locked-in for three years. Also, an excess of minimum promoters' contribution shall be locked-in for one year. Change in discretionary accruals one year after the IPO shows the impact of regulation as insiders have incentives to manipulate earnings only after one year of IPOs. Dilution in promoters' ownership explains the underpricing in SME IPOs. Post-issue leverage, Issue size explain the long-run performance of shares after listing.

Review of Literature and Hypotheses development

IPO provides a way for pre-IPO shareholders to exit and to raise capital for the firm's expansion. Valuation is the key to understand the fair price per share and plays a vital role in the success of IPO. However, empirical studies show that firms sell shares at a lower price than the fair price through IPOs. Asymmetric information theory explains the underpricing anomaly in IPOs (Ritter & Welch, 2002).

Insiders of the firm have more (private) information than the outsiders (investors) about the prospects of the company. However, potential shareholders rely mainly on the published financial statements and other disclosures shared by the firms. Accounting practices follow the principals of revenue recognition and accruals, and therefore it is challenging to extract accurate information about the financial health of the company. Information asymmetry about the financial health of the firm makes the valuation of share price difficult for potential investors (Roosenboom et al., 2002). Firms have incentives to reduce information asymmetry through credible signaling. Firms appoint credible underwriters, reputed auditors, involve PEIs/VCs in the early stage of financing (Carter & Manaster, 1990; Beatty 1989 and Megginson & Weiss 1991).

Issuers involve in earnings management before IPOs send positive signals about the financial health of the company so that they may get a higher valuation of the share price (Barth et al., 1999). Accounting regulations/practices allow managers for accruals. Accruals practices may change and reflect the business requirements

of the industry. Firms may manipulate accruals to show a better picture of the financial health of the firm. Issuers have incentives for opportunistic earnings management. Several studies have examined the earnings management before IPO but found mixed evidence. Studies show that firms involved in earnings management before IPO and have a positive relation with underpricing (Teao et al., 1998; DuCharme et al., 2001; Vinten et al., 2005; Nagata 2013; and Cheng et al., 2015). However, Armstrong et al., 2009 find conflicting results. Francis et al., 2012 find that technology firms follow conservative accounting practices around IPOs to avoid litigation risk.

Regulations play an essential role in limiting the opportunistic behavior of firms. Kao et al., 2005 examine the impact of the regulatory initiative on earnings management by IPO bound firms in China. Authors find that penalty regulations deter IPO bound firms for earnings management and have a positive impact on long-term performance on the share price of such firms.

Lee & Masulis, 2011 investigate the role of financial intermediaries on earnings management around IPOs. Authors find no relation to earnings management with the reputation of venture capital (VC) investors and Investment Banks (IBs). Ownership retention plays a vital role in earnings quality and reducing information asymmetry. Katz, 2009 finds that ownership structure, presence of private equity investors has an impact on earnings quality, and such firms perform well in the long-run. Cheng et al., 2015 examine the earnings management around IPO for state-owned firms and find that state-owned enterprises are less inclined to earnings management as compared to non-state-owned enterprises. Kouwenberg & Thontirawong, 2016 explore the earnings management for business group affiliated firms in six Asian countries. They conclude that business-group affiliated firms are less dependant on external borrowing and have better earnings quality as compared to non-business-group affiliated firms.

Information asymmetry is higher for SMEs than non-SMEs due to lack of publicly available accounting and other disclosure related information available, the low interest of institutional investors, and hence equity analysts (Ou & Haynes 2006). SMEs in India usually are family-run-businesses where promoters are family members and, in some cases, keep 100% equity shares. Going public is negative signaling for such firms. However, even after listing, the majority (more than 90%) of the shares are held by the promoters. SEBI regulation restricts promoters to sell shares by the promoters immediately after the listing. Twenty percent equivalent of post-issue capital of promoters shares have a lock-in period of three-years, and excess contribution is locked-in for one year. Therefore, we expect that managers have little incentives for earnings management in the case of SMEs in India. However, Due to the signaling effect, we may expect the presence of underpricing because of ownership dilution. The long-run performance of shares of such firms should be related to the firm-level characteristics such as leverage but not earnings management. Thus, we test the following hypotheses to examine the role of earnings management and ownership dilution.

H₁: Ownership dilution and level of underpricing are negatively associated.

H₂: Post-issue stock performance depends on discretionary accruals.

Institutional and Regulatory framework

Indian SMEs represent a diverse set of businesses. As per the 73rd NSS (National Sample Survey) of 2015-16, there was 633.88 lakh (31% manufacturing, 36% trade, and 33% other services) unincorporated non-agriculture MSMEs in India. Out of total MSMEs, 51.25% MSMEs were in the rural area; this makes MSMEs a critical component in carrying out the growth of the rural area⁵. Indian MSMEs are mainly (95.98%) proprietary enterprises. The main problem faced by Indian

⁵Annual Report 2018-19, Ministry of Micro, Small and Medium Enterprises, Government of India.

SMEs was the absence of an alternate channel through which they can have easy access to public capital. India is becoming conducive to the MSMEs with first permission to separate SME exchange and later with the support given by the Udyog Aadhar Memorandum (UAM) of online filing systems.

SEBI prescribed the framework for setting up of a separate trading platform for SMEs shares. Market-making is mandatory on these trading platforms to ensure liquidity. According to SEBI, an issuer company whose post-issue paid-up capital is not more than INR 10 Crore is eligible to list itself at the SME exchange. Firms with post issue paid-up capital in between INR 10 and INR 20 crore, have an option to register on SME Exchange or the mainboard. SME IPO issue has to be 100% underwritten with a minimum of 15% of the issue size to be funded by the merchant bankers. Minimum application size in an SME IPO is INR 100,000 per application, and a minimum number of allottees should be 50⁶. Companies listed on SME exchange shall compulsorily migrate on mainboard if their post issue paid-up capital is more than INR 25 Crore. An issuer with post issue paid-up capital between INR 10 Crore and INR 25 Crore has an option to migrate to the mainboard.

ICDR, 2009 allows SMEs to disclose their financial statements every six months instead of every quarter. The merchant banker to an IPO issue has to do market making for at least three years. Market Makers play an essential part in providing liquidity in the secondary market as they are supposed to provide quotes for more than 75% time of the trade. A market maker needs to offer a two-way quote for 75% of the time in a day. He needs to give advance information about the blackout period to the exchange. There should not be more than five-market makers per script.⁷

⁶ Standardized lot size for SME Exchange / Platform, SEBI Circular-CIR/MRD/DSA/06/2012 February 21, 2012.

⁷ Capital adequacy ratio is an essential criterion with other parameters in selecting market-maker by the exchanges (SEBI Circular, 2010b).

Data and Methodology

We extract data from three sources. IPOs related data received from the PRIME database. Firm-level is available in Centre for Indian Economy's (CMIE) Prowess database. The National Stock Exchange (NSE) and the Bombay Stock Exchange provides data on the share price. We started with all IPOs from the year 2015 to 2018; there were 385 SMEs raised funds through IPOs during the study period. Though the SEBI allowed SMEs to raise funds with relaxed norms and a separate trading platform in 2012, the number of IPOs is not quite high in initial years, and firm-level data is missing for many such firms; therefore, we choose the period from 2015 to 2018. We remove all firms in Banking and Financial Sector from our sample for the analysis as these firms' characteristics are different as compared to non-financial firms. We need firm-level data of IPO year and previous year to estimate measures of accruals. To reduce the influence of the outliers, we have not included top and bottom 1% firms. Finally, we arrive at a sample of 151 firms. We classify firms in different industries based on the two-digit National Industry Classification code (NIC); this is equivalent to the Global Industry Classification Standard (GICS) in developed markets. Table 1 shows the basic statistics of the sample.

Table 1: Sample Details		
Panel A: NIC two-digit distribution		
Industry	No. of IPO firms	%
Manufacturing	74	55.6

Electricity, gas	2	1.5
Construction	9	6.8
Wholesale and retail trade	25	18.8
Transportation and storage	7	5.3
Accommodation and food services	1	0.8
Information and communication	8	6.0
Professional, scientific and technical activities	2	1.5
Administrative and support service activities	5	3.8
Panel B: Time distribution of IPO firms		
2016	37	27.8%
2017	62	46.6%
2018	34	25.6%
Total	133	100.0%

Earnings Management Measures

Earnings management occurs when managers use their discretion over the accounting numbers with or without restrictions for firm value-maximizing or opportunistic gains. Earning management can also be carried out using the manipulation of real activities like accelerating sales, delaying R&D, alternating schedule of shipments, and changing maintenance expenditure.

In this paper, we are examining the role of earnings management on underpricing and long-term performance of shares of IPO bound firms. Non-discretionary accruals capture the business conditions and, therefore, necessary for the firms. For our analysis, we use discretionary accruals as the main proxy for earnings management. We follow Teoh et al. (1998) to decompose total accruals (TAcc) into discretionary current accruals (DCA), discretionary long-term accruals (DLA), non-discretionary current accruals (NDCA) and non-discretionary long-term accruals (NDLA).

First, we calculate the total accruals as

Total Accrual (TAcc) = Net Income – Cash flow from operations

Current accruals involve short-term changes involving current assets and liabilities. We use the following accounting equation to calculate current accruals.

$$CA = \Delta [\textit{account receivables} + \textit{inventory} + \textit{other current assets}] - \Delta [\textit{account payable} + \textit{tax payable}] + \textit{other current liabilities}$$

A cross-sectional regression provides the expected industry loadings for the factors which explain the CA. We match the firms in the same industry by using a two-digit NIC code. We ensure a minimum of 20 firms

for regression models so that our estimates would be consistent and unbiased.

$$\frac{CA_{k,t}}{TA_{k,t-1}} = \alpha_0 \left(\frac{1}{TA_{k,t-1}} \right) + \alpha_1 \left(\frac{\Delta Sales_{k,t}}{TA_{k,t-1}} \right) + \epsilon_{k,t} \quad k \in \textit{estimation sample}$$

We calculate nondiscretionary current accruals by using the estimated values of α_0 , α_1 , and with a change in sales and change in trade receivables for the firm in the year 't'.

$$NDCA_{i,t} \equiv \widehat{\alpha}_0 \left(\frac{1}{TA_{i,t-1}} \right) + \widehat{\alpha}_1 \left(\frac{\Delta Sales_{i,t} - \Delta TR_{i,t}}{TA_{i,t-1}} \right)$$

Discretionary current accruals are residuals obtained by removing nondiscretionary current accruals from the actual current accruals.

$$DCA_{i,t} \equiv \frac{CA_{i,t}}{TA_{i,t-1}} - NDCA_{i,t}$$

We follow a similar procedure for the estimation of long-term discretionary accruals. The discretionary total accruals $DAC_{i,t}$ for year 't' of IPO firm 'i' are regressed on change in sales and plant, property, and equipment (PPE) for the industry to obtain industry loadings for these factors.

$$\frac{Ac_{k,t}}{TA_{k,t-1}} = b_0 \left(\frac{1}{TA_{k,t-1}} \right) + b_1 \left(\frac{\Delta Sales_{k,t}}{TA_{k,t-1}} \right) + b_2 \left(\frac{PPE_{k,t}}{TA_{k,t-1}} \right) + \epsilon_{k,t}$$

$k \in \text{estimation sample.}$

Then we use regression coefficients of change in sales and PPE to obtain Nondiscretionary total accruals (NDTAC).

$$NDTAC_{i,t} \equiv \widehat{b}_0 \left(\frac{1}{TA_{i,t-1}} \right) + \widehat{b}_1 \left(\frac{\Delta Sales_{i,t} - \Delta TR_{i,t}}{TA_{i,t-1}} \right) + \widehat{b}_2 \left(\frac{PPE_{i,t}}{TA_{i,t-1}} \right)$$

Underpricing

Underpricing in IPOs is a well-researched topic in finance. Several studies estimate underpricing as the return realized by the investors if they get the shares at the offer price and sell them on the listing day close price (Agathee et al., 2012). Studies also suggest controlling for market returns realized between the IPO subscription date and listing date as market-adjusted returns will capture the impact of market movement during that time (Geng et al., 2010; Shen et al., 2014). We use both initial raw returns as a measure of underpricing and market returns as a control variable in the analysis for the robustness of the results.

$$UP = (P_c - P_o)/P_o$$

Where UP = underpricing, P_c = closing stock price on the first trading day, P_o = Offer price

Buy and Hold Abnormal Returns (BHAR)

BHAR (Buy and Hold abnormal Return) are extensively used to measure the long-term performance of stocks (Lyon et al., 1999). Previous studies have used stock performance for up to three years to capture the post-listing long-term share performance of the firms. We use Buy and Hold Returns of one year to measure the impact of discretionary accruals and ownership dilution for two reasons. First, we are using IPOs offered till 2018, so we don't have price history for more than a year. We remove the first three months' returns from the analysis as immediately

after IPOs share prices are quite volatile. We use one-year returns starting from t+3 to t+15 months, where 't' is the year of IPO.

$$BHAR_i = \left[\prod_{t=3}^T (1 + r_{i,t}) - 1 \right] - \left[\prod_{t=3}^T (1 + r_{m,t}) - 1 \right]$$

Where, $r_{i,t}$ = monthly return of share price for the i-th firm in the event month

$r_{m,t}$ = monthly return of The BSE SME IPO index in the event month

T = 15 months

Ownership Dilution

Dilution in ownership sends a negative signal in the market about the IPOs. Market suspect that promoters are diluting their ownership as firms' prospects may be weak (Fan 2007). We use percentage change in promoters holdings as a result of IPO as a dilution in ownership measure. We define ownership dilution as

Ownership dilution = (% promoter's shareholding before IPO - % promoter's shareholding after IPO) / (% promoter's shareholding before IPO)

Multiple Regression Models

The following regression model is used to check the relation between earning management and underpricing, BHAR.

$$UP_i = \alpha_0 + \beta_1 Discretionary\ Accrual\ Proxy_i + \gamma_1 Change\ in\ Promoters' Holdings_i + \gamma_2 BM_i + \gamma_3 PE_{ti} + \gamma_4 PostLev_i + \gamma_5 Liq_i + \gamma_6 IssueSize_i + \gamma_7 Age_i + e_{i,t}$$

$$BHAR_i = \alpha_0 + \beta_1 Discretionary\ Accrual\ Proxy_i + \gamma_1 Change\ in\ Promoters' Holdings_i + \gamma_2 PostLev_i + \gamma_3 B/M_i + \gamma_4 IssueSize_i + \gamma_5 Ln\left(\frac{P}{E}\right)_i + \gamma_6 Liq_i + \gamma_9 MktRet_i + e_{i,t}$$

Table 2: Details of the variable used in the regressions

Variable	Description
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DTA	Discretionary Total Accruals
DCA	Discretionary Current Accruals
DLA	Discretionary Long-term Accruals
Ownership Dilution	Change in Promoters' Holdings
B/M_i	Book value/ Market value of the IPO firm
$PostLev_i$	The book value of total debts divided by the book value of total assets of the IPO firm at the end of the IPO year
Liq_i	Volume traded divided by the number of shares outstanding of the IPO firm on first trading day
$Ln(P/E)_i$	Natural logarithm of price per share divided by EPS of the IPO firm at the time of offering
$IssueSize_i$	Natural logarithm of gross proceeds raised in IPO by the firm (In million INR)
Age_i	Log (1 + firm's age at the time of IPO)

Results and Discussion

Table 3 provides the descriptive statistics of discretionary and non-discretionary accruals for the IPO year (Year '0'), one year before the IPO Year (year '-1') and one year after the IPO year (year '+1'). The financial year in India is from 1st April to 31st March, and usually, companies submit annual financial statements for the period from 1st April to 31st March for each year. We also follow the same practice for calculating IPO year, e.g., if IPO is available for subscription on 20th Jan 2018, it will be counted as IPO year 2017-18. All accruals are scaled with last year's assets' size to make them comparable. (Jones, 1991) argued that non-discretionary accruals are necessary and reflect industry growth and economic conditions. However, discretionary accruals are the results of accounting choices and changes in credit policy to manipulate the financial numbers, and these accruals are at the discretion of the managers. As it is difficult for investors to capture such changes, managers may use their discretions to show a better picture of the financial health of the company before the IPO. However, it is difficult to continue such practices, and particularly for small companies where the complexities of the business are low and revenues and expenses can be analyzed easily as compared to large firms. Therefore we can expect a reversal in discretionary accruals later. (Guenther, 1994) argues that managers have little discretion in influencing long-term accruals as compared to current accruals, as accounting policies do not allow to make changes in the method of depreciation etc. and it is difficult to hide those changes.

Table 3 shows that discretionary current accruals are positive in previous years to IPO year. The mean of discretionary current accruals one-year before the IPO year was 1.053% and came down to 0.492%. Results suggest the weak presence of discretionary current accruals. However, the standard deviation (13.48%) in discretionary current accruals is significantly high and indicates that some of the firms are involved in earnings management through discretionary current

accruals. Surprisingly discretionary current accruals change dramatically in the next year after the IPO from 0.492% to 18.33%. An unexpected change in discretionary accruals after the IPOs needs further investigation. There is a one-year lock-in period for the underwriters and three years lock-in period for the promoters. A significant rise in discretionary accruals after the IPOs may be contributed to the pressure from the investors to maintain stock price after listing and to provide a better opportunity to exit for the promoters after the lock-in period. It is essential to mention that as per the regulations of SME IPOs, it is mandatory for the underwriters to invest 15% amount of the IPO size and the exit option is available only after one year. An increase in discretionary current accruals one year after the IPO may be to present a better financial picture of the company so that underwriters may exit with a better share price.

Table 3: Descriptive Statistics of Accruals			
Financial Year	-1	0	+1
Discretionary Total Accruals			
Mean	-0.236	-0.437	11.268
Median	0.029	0.175	11.060
Std. Dev.	14.068	14.999	17.782
Min.	73.337	-99.671	-85.684
Max.	55.175	37.091	87.510
N	133	133	133
Discretionary Current Accruals			
Mean	1.053	0.492	18.333
Median	0.647	0.439	15.470
Std. Dev.	13.482	13.826	20.679
Min.	44.522	-55.349	-29.376
Max.	46.302	41.514	107.706
N	133	133	133
Discretionary Accruals		Long-term	
Mean	-1.289	-0.929	-7.065
Median	-1.859	-1.142	-3.947
Std. Dev.	15.542	10.385	20.138

	-		
Min.	48.626	-44.322	-147.132
Max.	58.988	31.365	35.829
N	133	133	133
Nondiscretionary Total Accruals			
Mean	-1.215	-1.062	-1.904
Median	-1.439	-1.370	-0.991
Std. Dev.	4.689	7.621	4.323
	-		
Min.	17.719	-19.903	-43.586
Max.	36.097	80.292	7.619
N	133	133	133
Nondiscretionary Current Accruals			
Mean	0.404	0.638	0.629
Median	0.075	0.381	0.364
Std. Dev.	2.741	2.209	3.798
Min.	-9.049	-16.775	-28.105
Max.	18.742	6.847	23.200
N	133	133	133
Nondiscretionary Long-term Accruals			
Mean	-1.619	-1.700	-2.533
Median	-1.690	-1.832	-2.019
Std. Dev.	4.435	7.157	2.763
	-		
Min.	10.965	-9.350	-15.581
Max.	37.624	76.598	2.906
N	133	133	133

Total accruals increase significantly after the IPO year. Significantly high Variations in total accruals in discretionary accruals as compared to non-discretionary accruals show that some firms involved in earnings management through discretionary accruals.

Table 2: Descriptive Statistics of Under-pricing

Table 4 provides descriptive statistics of underpricing in IPOs. In all three years of the study period, we find that there is evidence of underpricing.

Table 4: Descriptive Statistics						
	Mean	Median	Std. Dev.	Min.	Max.	N
Panel A: Underpricing in IPOs						
2016-2017	6.64	4.01	8.14	-12.9	18.2	37
2017-2018	5.15	3.48	11.06	-22.3	18.2	62
2018-2019	4.50	2.96	6.22	-5.1	24.6	34
Total	5.40	3.28	9.22	-22.3	24.6	133
Panel B: Post-listing Stock Performance (After one year)						
One Year Raw Returns	-9.23	-9.70	53.13	-214	303	133
One Year Index Return	-14.1	-15.48	24.37	-38.8	51.4	133
One Year BHAR	4.93	-1.11	51.71	-182	284	133
Panel C: Promoters Holdings						
Promoters' Holding Before IPO (%)	90.75	98.14	13.15	37.42	100.0	133
Promoters' Holding After IPO (%)	65.89	69.25	9.34	24.32	73.63	133
Change in Promoters Holdings (%)	27.30	27.00	3.49	0	36.31	133
Panel D: Control Variables						
Book to Market	0.62	0.58	0.25	0.16	1.47	133
Log (Age)	1.17	1.15	0.22	0.70	1.65	133
Issue Size	4.80	4.88	0.79	2.91	6.69	133
LnPEi	2.58	2.69	1.32	0	8.00	133
PostLevi	0.328	0.333	0.165	0	0.723	133
Liqi	0.057	0.035	0.069	0	0.333	133

Underpricing in all three years is between 5% to 6%, which is consistent with the underpricing in SMEs in the Indian market (Arnab, 2017). First day minimum and maximum returns for the firms with IPOs in the year 2016, 2017, and 2018 were 18.23 (-12.98), 18.23(-22.31), and 44.56(-5.13) respectively. Variations in underpricing across firms motivate us to analyze what are the reasons for underpricing. Performance of share price after the listing is not very encouraging and one-year returns are -9.23%. As there is no broad index for SMEs available in the Indian market and only SME IPO index is available, we take a small-cap

index as a proxy for the index to compare the share performance of SME firms post-listing. Net small-cap index return adjusted buy and hold returns after three months of the listing shows that returns in a year were around 4.93% with a standard deviation of 51.71%. Very high variation in returns shows that the performance of share price varies significantly after listing; this may be an indication of the presence of very high idiosyncratic risk associated with returns.

Panel C of Table 4 provides descriptive statistics of promoter's holdings before and after IPOs. On average, promoters' ownership dilutes around 27.30% after IPOs. Promoters' ownership dilutes from 90.75% to 65.89%. As regulation allows maximum (minimum) 74% (20%) ownership by promoters in a listing firm, we can see that maximum (minimum) promoters holding is 73.63% (24.32%), but even after listing average promoter's ownership remains above the majority shareholding of 50%. After IPO, the control is still with the promoters, and there is very little control available with the other shareholders. Panel D provides the details of the statistics associated with other variables such as Book to market, Age of the firm, Issue size, price-to-earnings after the IPO, post IPO leverage, and liquidity in the shares on a listing day.

Regression Results

We use a multiple regression model to examine the drivers of underpricing in IPO. We use returns from offer price to listing day closing price as a measure of underpricing as defined in equation 4. As an explanatory variable, we use total discretionary accruals, current discretionary accruals, and long-term discretionary accruals in three different regression models and dilution in promoters' holdings with other control variables. In all regression models, we take firms that show underpricing, and therefore the number of firms in the regression reduced to 109. Table 5 reports the regression results of all three models. Results show that dilution in promoters holding explains the

underpricing, not the discretionary accruals. Higher the dilution in promoters holding results in more underpricing in the IPOs.

Model Variable	Model – I	Model - II	Model - III
(Constant)	27.87** (2.55)	27.94** (2.52)	27.19** (2.44)
DTA	-2.206 (-0.42)		
DCA		0.452 (0.09)	
DLA			-1.934 (-0.43)
Change in Promoters' Holdings	-66.45** (-2.31)	-64.56** (-2.22)	-64.38** (-2.25)
BMi	2.776 (0.83)	2.773 (0.83)	2.79 (0.84)
Agei	-2.743 (-0.88)	-2.824 (-0.90)	-2.669 (-0.85)
IssueSizei	0.307 (0.31)	0.225 (0.23)	0.312 (0.32)
LnPEi	-1.106** (-2.22)	-1.117** (-2.23)	-1.124** (-2.26)
PostLevi	4.314 (0.95)	4.202 (0.92)	4.447 (0.97)
Liqi	3.452 (0.33)	3.25 (0.31)	3.161 (0.3)
R-Square	0.12	0.11	0.11
Adjusted R-Square	0.049	0.048	0.05
F-Statistics	1.71	1.68	1.71
N	109	109	109

Further, we divide the discretionary accruals based on aggressive discretionary accruals and conservative accruals based on the median level of accruals to check the robustness of the results. We find that not the discretionary accruals but change in promoter's holding explain the underpricing in SMEs in India. Results have not been reported here for the brevity of the space but available on request with the authors. Again, the change in promoter's holding is significant in all three

models. Our results support the signaling effect, which argues that dilution in promoters' ownership through IPOs sends a negative signal in the market. Therefore, firms provide discounts in the form of underpricing to get a successful subscription of the IPOs. The coefficient of P/E is negative and statistically significant, which shows that growth firms that generally require more funds for growth provide higher underpricing.

Long-term Performance

If managers are involved in earnings management by managing discretionary accruals, it is interesting to see the impact of such activities on the long-term performance of the share price. We examined the effect of accruals on the long-term performance of the share price.

As we have taken all IPOs from the year 2016 to 2018, we have share price information of around one year only as share price may be very volatile at the initial phase after listing. Consistent with finance literature, we use share price data for 12 months, starting after three months of listing.

Results show (see Table 6) that discretionary accruals do not explain the long-term performance of share price. In all three models, discretionary total accruals, discretionary current accruals, and discretionary long-term accruals have negative coefficients, which shows that discretionary accruals hurt the stock performance. However, coefficients are not statistically significant even at 10% level of confidence. Insignificant coefficient of discretionary accruals supports our earlier results on descriptive statistics, which shows that there is not much evidence of discretionary accruals before IPOs by the firms. Issue size, post-IPO leverage, Book to Market hurt the long-run performance of the shares after the listing. Results show that leverage, which is proxy for risk, is explaining the returns on stocks after listing.

Table 6: Long-term Performance of stock returns after the IPOs

Model	Model - I	Model - II	Model - III
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Variable			
(Constant)	1.149*	1.109*	1.065*
	(1.87)	(1.82)	(1.73)
DTA	0.004		
	(0.01)		
DCA		0.353	
		(1.07)	
DLA			-0.278
			(-0.95)
Change in Promoters' Holdings	-0.43	-0.306	-0.44
	(-0.33)	(-0.24)	(-0.34)
Issue Size	-0.149**	-0.149**	-0.138**
	(-2.44)	(-2.51)	(-2.27)
LnPEi	0.0251	0.0218	0.0235
	(0.73)	(0.63)	(0.68)
PostLevi	-0.482*	-0.464*	-0.429
	(-1.70)	(-1.66)	(-1.51)
Liqi	0.203	0.182	0.215
	(0.32)	(0.29)	(0.34)
BMi	-0.450**	-0.458**	-0.454**
	(-2.36)	(-2.41)	(-2.39)
Agei	0.0818	0.0898	0.0964
	(0.39)	(0.43)	(0.46)
R-Square	0.1006	0.1089	0.107
Adjusted R-Square	0.0426	0.0514	0.0494
F-Statistics	1.73	1.89	1.86
N	133	133	133

t-statistics is given in parentheses

* 10% Significance level, ** 5% Significance level, *** 1% Significance level

Conclusions

In this study, we examine the role of discretionary accruals, and ownership dilution on the underpricing and long-term performance of the stocks of the IPO bound SME firms from a period from 2016 to 2018 in the Indian market. We find that change in ownership dilution explains the underpricing in the IPO but not the discretionary accruals. However, discretionary accruals change significantly next year after the IPO; this may be due to the regulation that makes mandatory investment by the underwriter with a lock-in period of one year. Promoters'

ownership dilution explains the underpricing in SMEs IPOs and stock with post-issue lower leverage perform well in the long-run.

References:

Abdulsaleh, A. M., & Worthington, A. C. (2013). Small and medium-sized enterprises financing: A review of literature. *International Journal of Business and Management*, 8(14), 36.

Armstrong, C., Foster, G., & Taylor, D. J. (2009). Earnings management around initial public offerings: A re-examination. *SSRN eLibrary*.

Banerjee, S., Dai, L., & Shrestha, K. (2011). Cross-country IPOs: What explains differences in underpricing? *Journal of Corporate Finance*, 17(5), 1289-1305.

Barth, M., and G. Clinch. 1999. "Scale Effects in Capital Markets-Based Accounting Research." Working paper, Stanford University.

Bayar, O., & Chemmanur, T. J. (2011). IPOs versus acquisitions and the valuation premium puzzle: a theory of exit choice by entrepreneurs and venture capitalists. *Journal of Financial and Quantitative Analysis*, 46(6), 1755-1793.

Beatty, R. P. (1989). Auditor reputation and the pricing of initial public offerings. *Accounting Review*, 693-709.

Beatty, R. P., & Ritter, J. R. (1986). Investment banking, reputation, and the underpricing of initial public offerings. *Journal of Financial Economics*, 15(1), 213-232.

Beatty, R. P., & Ritter, J. R. (1986). Investment banking, reputation, and the underpricing of initial public offerings.

Bhattacharya, A. (2017). Innovations in new venture financing: Evidence from Indian SME IPOs. *Global Finance Journal*, 34(C), 72-88.

Booth, J. R., & Chua, L. (1996). Ownership dispersion, costly information, and IPO underpricing. *Journal of Financial Economics*, 41(2), 291-310.

Bruner, R., Chaplinsky, S., & Ramchand, L. (2004). US-bound IPOs: Issue costs and selective entry. *Financial Management*, 39-60.

Bruton, G. D., Chahine, S., & Filatotchev, I. (2009). Founders, private equity investors, and underpricing in entrepreneurial IPOs. *Entrepreneurship Theory and Practice*, 33(4), 909-928.

- Carter, R., & Manaster, S. (1990). Initial public offerings and underwriter reputation. *The Journal of Finance*, 45(4), 1045-1067.
- Casey, E., & O'Toole, C. M. (2014). Bank lending constraints, trade credit and alternative financing during the financial crisis: Evidence from European SMEs. *Journal of Corporate Finance*, 27, 173-193.
- Changwen, Y. J. Z. (2006). Pricing Mechanism, Underwriting Contracts and Issue Costs; Evidence from China's IPO Market [J]. *Journal of Financial Research*, 5.
- Cheng, C. A., Wang, J., & Wei, S. X. (2015). State ownership and earnings management around initial public offerings: evidence from China. *Journal of International Accounting Research*, 14(2), 89-116.
- Cravo, T. A., Gourlay, A., & Becker, B. (2012). SMEs and regional economic growth in Brazil. *Small Business Economics*, 38(2), 217-230.
- DuCharme, L. L., Malatesta, P. H., & Sefcik, S. E. (2001). Earnings management: IPO valuation and subsequent performance. *Journal of Accounting, Auditing & Finance*, 16(4), 369-396.
- Fan, Q. (2007). Earnings management and ownership retention for initial public offering firms: Theory and evidence. *The Accounting Review*, 82(1), 27-64.
- Francis, B. B., Hasan, I., & Zhou, M. (2012). Strategic conservative earnings management of technology firms: Evidence from the IPO market. *Financial Markets, Institutions & Instruments*, 21(5), 261-293.
- Guenther, D. A. (1994). Earnings management in response to corporate tax rate changes: Evidence from the 1986 Tax Reform Act. *Accounting Review*, 230-243.
- Hoque, H. (2014). Role of asymmetric information and moral hazard on IPO underpricing and lockup. *Journal of International Financial Markets, Institutions and Money*, 30, 81-105.
- Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of accounting research*, 29(2), 193-228.
- Kao, J. L., Wu, D., & Yang, Z. (2009). Regulations, earnings management, and post-IPO performance: The Chinese evidence. *Journal of Banking & Finance*, 33(1), 63-76.

Katz, S. P. (2009). Earnings quality and ownership structure: The role of private equity sponsors. *The accounting review*, 84(3), 623-658.

Kim, M., & Ritter, J. R. (1999). Valuing IPOs. *Journal of financial economics*, 53(3), 409-437.

Kouwenberg, R., & Thontirawong, P. (2016). Group affiliation and earnings management of Asian IPO issuers. *Review of Quantitative Finance and Accounting*, 47(4), 897-917.

Lee, G., & Masulis, R. W. (2011). Do more reputable financial institutions reduce earnings management by IPO issuers? *Journal of Corporate Finance*, 17(4), 982-1000.

Ljungqvist, A. (2007). IPO underpricing. In *Handbook of Empirical Corporate Finance* (pp. 375-422). Elsevier.

Loughran, T., & Ritter, J. (2004). Why has IPO underpricing changed over time? *Financial management*, 5-37.

Lowry, M., & Shu, S. (2002). Litigation risk and IPO underpricing. *Journal of Financial Economics*, 65(3), 309-335.

Lyon, J. D., Barber, B. M., & Tsai, C. L. (1999). Improved methods for tests of long-run abnormal stock returns. *The Journal of Finance*, 54(1), 165-201.

Massel, Norman and Park, Jung Eun and Reichelt, Kenneth John, The Valuation, Revenue Management, and Subsequent Financial Restatement of IPO Firms (April 7, 2017). Available at SSRN: <https://ssrn.com/abstract=2954646>

Meggison, W. L., & Weiss, K. A. (1991). Venture capitalist certification in initial public offerings. *The Journal of Finance*, 46(3), 879-903.

Nagata, K. (2013). Does earnings management lead to favorable IPO price formation or further underpricing? Evidence from Japan. *Journal of Multinational Financial Management*, 23(4), 301-313.

Ou, C., & Haynes, G. W. (2006). Acquisition of additional equity capital by small firms—findings from the national survey of small business finances. *Small Business Economics*, 27(2-3), 157-168.

Pagano, M., Panetta, F., & Zingales, L. (1996). The stock market as a source of capital: Some lessons from initial public offerings in Italy. *European Economic Review*, 40(3-5), 1057-1069.

Park, H. D., & Patel, P. C. (2015). How does ambiguity influence IPO underpricing? The role of the signalling environment. *Journal of Management Studies*, 52(6), 796-818.

Pastor-Llorca, M. J., & Poveda-Fuentes, F. (2006). Earnings management and the long-run performance of Spanish initial public offerings. In *Initial Public Offerings* (pp. 81-112). Butterworth-Heinemann.

Raghavan, S., & Sarwono, D. (2012). Corporate bond market in India: lessons from abroad and road ahead. *International Journal of Trade, Economics and Finance*, 3(2), 120.

Ritter, J. R., & Welch, I. (2002). A review of IPO activity, pricing, and allocations. *The journal of Finance*, 57(4), 1795-1828.

Roosenboom, P., van der Goot, T., & Mertens, G. (2003). Earnings management and initial public offerings: Evidence from the Netherlands. *The International Journal of Accounting*, 38(3), 243-266.

Ryan, R. M., O'Toole, C. M., & McCann, F. (2014). Does bank market power affect SME financing constraints? *Journal of Banking & Finance*, 49, 495-505.

SEBI (issue of capital and disclosure requirements) regulations, 2009.

SEBI-Master Circular, 2010; Master Circular on Administration of Stock Exchanges, Arbitration in recognised Stock Exchanges and Stock Exchanges / trading platform for Small & Medium Enterprises including guidelines for Market Makers.

SEBI- Circular, 2010b; Guidelines for market makers on Small and Medium Enterprise (SME) exchange/separate platform of existing exchange having nationwide terminal, SEBI Circular CIR/MRD/DP/ 14 /2010, April 26, 2010.

SEBI-ICDR (2018) Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) (Third Amendment) Regulations, 2010, April 13, 2010.

Smith, R., Pedace, R., & Sathe, V. (2011). VC fund financial performance: The relative importance of IPO and M&A exits and exercise of abandonment options. *Financial Management*, 40(4), 1029-1065.

Taiwo, M. A., Ayodeji, A. M., & Yusuf, B. A. (2012). Impact of small and medium enterprises on economic growth and development. *American journal of business and management*, 1(1), 18-22.

Teoh, S. H., Welch, I., & Wong, T. J. (1998). Earnings management and the underperformance of seasoned equity offerings. *Journal of Financial Economics*, 50(1), 63-99.

Vinten, G., Chen, K. Y., Lin, K. L., & Zhou, J. (2005). Audit quality and earnings management for Taiwan IPO firms. *Managerial Auditing Journal*.