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**Article**

## Institutional ownership and earnings management: Evidence from India

Cogent Economics & Finance

**Provided in Cooperation with:**

Taylor & Francis Group

*Suggested Citation:* Potharla, Srikanth; Bhattacharjee, Kaushik; Iyer, Vishwanathan (2021) :  
Institutional ownership and earnings management: Evidence from India, Cogent Economics &  
Finance, ISSN 2332-2039, Taylor & Francis, Abingdon, Vol. 9, Iss. 1, pp. 1-21,  
<https://doi.org/10.1080/23322039.2021.1902032>

This Version is available at:

<https://hdl.handle.net/10419/270060>

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To cite this article: Srikanth Potharla, Kaushik Bhattacharjee & Vishwanathan Iyer | (2021) Institutional ownership and earnings management: Evidence from India, Cogent Economics & Finance, 9:1, 1902032, DOI: [10.1080/23322039.2021.1902032](https://doi.org/10.1080/23322039.2021.1902032)

To link to this article: <https://doi.org/10.1080/23322039.2021.1902032>



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Received: 29 October 2020  
Accepted: 07 March 2021

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Reviewing editor:  
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## FINANCIAL ECONOMICS | RESEARCH ARTICLE

# Institutional ownership and earnings management: Evidence from India

Srikanth Potharla<sup>1</sup>, Kaushik Bhattacharjee<sup>1</sup> and Vishwanathan Iyer<sup>2\*</sup>

**Abstract:** The present study analyzes and assesses the robustness of monitoring effectiveness of institutional investment against the information asymmetry prevailing in the market, especially the asymmetric monitoring effectiveness of Domestic Institutional Investment (DII) vis-à-vis Foreign Institutional Investment (FII). Drawing from a sample of listed non-financial firms with institutional investment of 20% or more, this study tests the relationship between earnings management and institutional ownership controlling for known firm-specific variables. The results reveal that institutional investment in aggregate as well as DII and FII have significant negative impact on earnings management supporting the active monitoring hypothesis. The results also support hometown advantage hypothesis for the sub-group of companies with higher Price to Book Value (PBV) and global investor hypothesis for the sub-group of companies with lower PBV ratio. Various implications applicable in the Indian markets contexts are discussed. Domestic institutional investors should improve their cost-effective technology to acquire and process the price-sensitive information which can enhance their competitive advantage over their foreign counterparts. This is one among the first few studies that tests the

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### PUBLIC INTEREST STATEMENT

Emerging markets such as India are characterized by high agency conflicts, weak governance controls, more information asymmetry. All these factors incentivize the management of the firms to manipulate the reported earnings to meet or beat the earnings targets. In such situations, given the size and clout of institutional investors, policymakers and market participants expect them to play a constructive role in ensuring the quality of corporate governance.

Diversified characteristics of domestic and foreign institutional investments (FIIs) yield varying results in constraining the earnings management in the investee firms. The empirical results reveal that where the markets are characterized by significant information asymmetry, foreign institutional investors play significant role in constraining earnings management, which may be attributed to their arm's length relationship with the investee firm, resilience from local political pressures; having state-of-art technology in acquisition and processing of information. So, the findings of our study suggest promoting FII in order to improve the quality of financial reporting by the firms in India.

robustness of monitoring effectiveness of institutional investment against the information asymmetry in the market and shows that monitoring effectiveness of FII and DII is not uniform across companies in which they invest. Another contribution to the extant literature in India is the analysis using alternative definitions of earnings management, incorporating industry-specific and time-specific factors in estimation of discretionary accruals.

**Subjects:** Corporate Finance; Investment & Securities; Financial Accounting; Financial Statement Analysis

**Keywords:** earnings management; Institutional ownership; Active Monitoring Hypothesis; Home Town Advantage Hypothesis; Global Investor Hypothesis; India

### 1. Introduction

As evidenced by prior literature, size of investment is positively associated with the monitoring effect of the investors. The literature argues that large shareholders like institutional investors can exercise cost-effective monitoring compared to retail investors (Shleifer & Vishny, 1986). The present study extends this argument to test the monitoring effect of institutional investors on the earning management in the investee firms. The prior studies like Bushee (1998) also support that monitoring by institutional investors negatively affects the earnings management. Moreover, diversity in institutional investment in the form of domestic and foreign institutional investment also affects the monitoring power of the institutional investors.

The advantages and limitations of the two types of institutional investors are not similar in monitoring the earnings management of the investee firm. Domestic institutional investors have geographical proximity to investee firms, and it helps them in acquiring and processing the information more effectively and efficiently compared to their counterpart foreign institutional investors who cannot have geographical proximity to investee firms (J. Coval & Moskowitz, 1999). The present study tests the research question which stems from “home town advantage” hypothesis (inter-alia, J. D. Coval & Moskowitz, 1999; K.-H. Bae et al., 2008; Ayers et al., 2011; Du et al., 2017; Liu et al., 2018) which argues that “domestic institutional investors have comparative advantage over foreign institutional investors in constraining the earnings management”.

Another strand of research argues that foreign institutional investors are at advantage in monitoring the investee firm due to their resilience to political pressures; maintain arm’s length relationship with the investee firm; and possessing start-of-art technology in acquiring and processing the information. The present study tries to address the research question on the comparative monitoring advantage of foreign institutional investors vis-à-vis domestic institutional investors against the backdrop of the extant literature relating to “Global Investor Hypothesis” (inter-alia, Aggarwal et al., 2011; Grinblatt & Keloharju, 2001; Hartzell & Starks, 2003; Hau, 2001; Huang & Zhu, 2015; Kim et al., 2016; Lin & Fu, 2017; Tsang et al., 2019). Testing the “global investor hypothesis” in Indian context gains more importance because the prior studies in other emerging markets proved that the impact of foreign institutional investors is stronger where information asymmetry is more; corporate governance and disclosure standards are weak and agency conflicts are high (Tsang et al., 2019).

The prior literature also documents that information asymmetry also influences the comparative advantage in monitoring the investee firm by the domestic and foreign institutional investors (Ayers et al., 2011). The prior studies in Indian context have not tested the moderating effect of information asymmetry on the relationship between institutional investment and earnings management (inter-alia, Ajay & Madhumathi, 2015; Sarkar et al., 2008, 2013; Varma, 1997). The present study extends its baseline results to address the research question on how information asymmetry moderates the relationship between institutional investment and earnings management. This research question

gains its importance in the Indian context due to the presence of more information asymmetry in the Indian market due to poor corporate governance and disclosure standards.

The overall research problem gains its importance in the Indian context, because of the uniqueness of Indian market compared to other markets. As argued by the studies like Hegde et al., (2020), Indian market is unique in terms of ownership concentration, growth opportunities, competition in the product and market, and level of development of capital market. Moreover, promulgation of companies act, 2013, expected to bring significant changes in the corporate governance system in India. The Act has introduced many provisions relating to corporate governance like composition of board, compulsory resident director, women directors on the board, etc. Against this backdrop, testing the monitoring effect of institutional investment in India in the recent past gains more importance.

The present study is expected to provide both theoretical and practical contribution to the domain of research relating to earnings management. The findings of the present study help in understanding how the institutional ownership and its diversity (i.e. domestic and foreign institutional investment) helps in constraining the accruals management having both long-run and short-run implications. In other words, it contributes to the scant extant literature on home town advantage hypothesis and global investor hypothesis in emerging markets like India. The findings of the present study are also useful to the researchers and academician in understanding how the information asymmetry influences the monitoring effect of institutional investment.

The remaining part of the paper is divided into five parts. Section 2 elaborates the theoretical background of the research problem, literature review, and hypothesis development. Section 3 presents methodology, that is, sample design, data sources, empirical model, definitions and the variables of the model and their hypothesized relationship with earnings management. Section 4 presents results of the analysis and their discussion and finally section 5 concludes by summarizing the findings.

## **2. Theoretical background of the research problem, literature review, and hypotheses development**

### **2.1. Literature supporting active monitoring hypothesis**

According to “active monitoring hypothesis,” the institutional investors engage in active monitoring of the firm’s activities. Large size investment, made by the institutional investors, compels them to track and monitor the management of the firm to the extent possible. In this direction, one of the first attempts was made by Shleifer and Vishny (1986) wherein the author studied the relationship between large shareholders and corporate control. The study argued that if there were large number of small shareholders, no such shareholders will be at advantage by monitoring the performance of the investee firm due to more costs of monitoring, which may exceed the benefit derived from it. Brickley et al. (1988) documented an evidence in favour of strong voting power of blockholders,<sup>1</sup> especially, in taking decision on anti-takeover amendments compared to non-block-holders. They found if there is any proposal by the board which seems to harm the interest of the shareholders, the blockholders strongly oppose the same. Naturally, such monitoring will have a negative impact on earnings management by the investee firms (Bushee, 1998). One of the main alleged misuse of the discretionary financial reporting is inflating reported earnings in performance-based compensation structure. Hence, monitoring by institutional investors with respect to earnings management will be effective only when they can influence the compensation structure of the executives. Hartzell and Starks (2003) found that institutional investors’ concentration has negative relation to the level of compensation paid to management providing an evidence for the hypothesis that institutional investors influence negatively the compensation structure of the managers, through their monitoring of the earnings management of the company. Cornett et al. (2008) showed that institutional investors’ representation on the “board of directors” negates the impact of option compensation to management.

### **2.2. Literature supporting hometown advantage hypothesis**

Although there is unanimity and enough empirical support with respect to “active monitoring hypothesis” so far as influence of institutional investors is concerned, there exist difference of opinions with respect to the origin and location of the institutional investors. One strand of literature argues that among the institutional investors, Domestic Institutional Investments (DIIs) will have geographical proximity not only to investee firm, but also to the stock research analysts, media, credit rating agencies etc., and hence, they will have comparative advantage over Foreign Institutional Investments (FIIs) in terms of acquiring and processing the information relating to the investee firm, creating information asymmetry between DIIs & FIIs; this conjecture is better known as “home town advantage.” J. Coval and Moskowitz (1999) in one among the earlier studies, documented strong home bias in selection of securities for international investment portfolios by US investment managers. Their study suggests that the driving force to prefer geographical proximity by the professional money managers is information asymmetry between local and non-local investors. Ayers et al. (2011) examined the impact of institutional ownership on earnings management in the light of this information asymmetry. The study evidenced that local monitoring institutions have exerted comparatively better monitoring power in constraining the financial reporting discretion. The study also documented significant differences in the impact of monitoring institutions due to the change in costs and benefits of discretionary financial reporting. The study by Du et al. (2017) examined how culture affects information asymmetry in financial markets. The study found that forecasts of Chinese analysts are more accurate than non-Chinese analysts. Evidence of comparative advantage of domestic institutional investors can be found in the two most recent studies: Liu et al. (2018) examined institutional blockholders’ influence on Earnings Management. The study found evidence that institutional blockholders constrain opportunistic financial reporting, and it can be done more effectively by DIIs blockholders compared to their counterpart FII block-holders. The study also revealed that where there are FII blockholders with short-term investment objectives, it leads to more discretionary reporting. Liu et al. (2018) also proved that domestic institutional investors can perform passive monitoring more effectively compared to foreign institutional investors in constraining discretionary financial reporting in the Korean Market.

### **2.3. Literature supporting global investor hypothesis**

Contrary to the studies mentioned earlier, there exists another equally convincing conjecture better known as “Global Investor Hypothesis” which claims foreign institutional investors can *effectively* monitor the corporate entities worldwide much better than their domestic counterpart. The positive externalities of independent foreign institutional ownership may be the improvement in firm value, better operating performance and so on. Ferreira and Matos (2008) evidenced the same fact in their study using a comprehensive data set of equity holdings from 27 countries. The study also found that foreign institutional investors prefer large firms with good governance practices. Resilience from local political pressures and having arm’s length negotiations with investee firm enables stronger monitoring effectiveness of institutional investors. Huang and Zhu (2015) evidenced that “Qualified Foreign Institutional Investors (QFIIs)” are not susceptible to political pressures and their negotiations will be arm’s length in state-controlled investee companies while local institutional investors like mutual funds easily come under the political pressure. Cross-border institutional investment fosters corporate governance and better corporate disclosure practices. Tsang et al. (2019) investigated the impact of “foreign institutional investors” on voluntary disclosure practices. The study found that independent foreign institutional ownership improves precision of management forecasts. The impact was stronger in case of firms having greater information asymmetry and operating in an environment having no strong corporate governance and disclosure standards. Empirical evidence documents direct link between international portfolio investment and the adoption of better corporate governance practices by the investee firms and it leads to improvement in corporate accountability and also empowers shareholders. Aggarwal et al. (2011) examined whether institutional investors influence corporate governance. The study found that the practices and outcome of corporate governance of investee firm are positively associated with international institutional investment and it improved the value of firm over a period of time. Empirical evidence suggests that two factors contribute to the positive relationship between large-size “foreign



institutional ownership” and “shareholders” value, namely,, analysts show more interest in the firms in which large-size foreign institutional ownership is relatively high and insider ownership is also reduced to increase the shareholding of large-size foreign institutional ownership. Lin and Fu (2017) evidenced it on large sample of Chinese listed firms. Identifying the economic drivers of monitoring effectiveness sheds light on the comparative advantage of domestic and foreign institutional investors. Kim et al. (2016) made an attempt in this regard by identifying three economic drivers of monitoring effectiveness, namely, proximity to monitoring information; proclivity toward activism; and superior monitoring technology. They argue that foreign institutional investors acquire superior advantage in a corporate environment where agency conflicts are high and governance controls are very weak. The study also evidenced that “foreign institutional ownership” has comparative monitoring advantage in emerging countries rather than in developed countries. The international institutional investors with long-term investment horizons are more inclined to exert influence in constraining the discretionary financial reporting. The recent study in this direction revealed that investment horizons show significant impact on the monitoring role of international institutional investors. Harford et al. (2018) showed that long-term international institutional investors improve the quality of governance and constrain earnings management. The existing literature also corroborates comparative advantage of foreign institutional investors which stems from the forces like “proclivity towards activism,” “applying sophisticated cost-effective technology in acquisition and processing of monitoring information,” “independence of investor,” “resilience to local political pressure” and so on.

Against this backdrop of conflicting lines of thoughts, as to which type of institutional investment is more influential so far as earnings management is concerned and arguments supported by conflicting empirical results, the present study is an attempt to identify which one of the two competing dominant hypotheses is actually relevant in the Indian context.

There are only a few studies on earnings management and its relationship with institutional investment in Indian context. The focus is more on impact of institutional investors and blockholders on the quality of corporate governance in India. Studies like Varma (1997) discussed about the role of outside investors in monitoring the dominant shareholders of their investee company. The study found that Indian capital market is gaining its power in disciplining the dominant shareholders by not showing interest in the firms which are not maintaining quality of corporate governance. Sarkar and Sarkar (2000) studied the effectiveness of large shareholders in corporate governance in India. The study found that blockholdings by directors had positive impact on the value of the firm. However, domestic institutional investors like mutual funds were found to be not playing an active role in corporate governance. The study also found that the lending institutions had gained effective monitoring power on the borrower company after they got substantial equity holdings in the borrowing company. Sarkar et al. (2008) studied the impact of board characteristics on earnings management. The study also tested the impact of institutional investment in the presence of varying board characteristics. The study evidenced that only domestic institutional investment has significant negative impact on earnings management, but not foreign institutional investment. The study revealed that board independence from promoters influence and Indian institutional ownership are the substitutes for improving the quality of financial reporting. Sarkar et al. (2013) made a study on the impact of inside ownership on earnings management while moderating the effect of group affiliation. The study reveals that institutional ownership (both domestic and foreign) has significant negative impact on increasing earnings management. The impact of institutional ownership is robust even after controlling the impact of group affiliation. Ajay and Madhumathi (2015) examined the impact of institutional investment on earnings management. The results of the analysis reveal that firms with higher institutional holdings have higher quality of earnings reflected through lower level of discretionary accruals. The study found that the negative impact of institutional ownership is more robust for large and matured firms. The study reveals that monitoring the effect of institutional investors is more effective when their investment is higher than 15% and foreign institutional investors can effectively monitor the discretionary financial reporting when their holdings are higher than 13% (approximately).

The most recent study by Ajay and Madhumathi (2015) applies the questionable definition of total discretionary accruals in measurement of earnings management. Further, the study is silent on whether the ability of either Domestic or Foreign Institutional Investors is conditional upon how well these firms are tracked by the analysts. Hence, we find a compelling need to revisit this question and assess whether there are limits to the monitoring capacity of these Institutional Investors. In this process, we also have an opportunity to expand the above-mentioned study to include more time periods.

As mentioned earlier, the existing literature has well-documented comparative advantage of domestic institutional investors by virtue of various driving forces like information asymmetry, geographic proximity, cultural diversity etc. This leads to our first proposition:

*Proposition-1: Domestic Institutional Ownership has comparative advantage over the Foreign Institutional Ownership in constraining the earnings management (Hometown Advantage hypothesis).*

On the other hand, foreign institutional investors apply sophisticated cost-effective technology in acquisition and processing of monitoring information, so, when information acquisition and processing costs are high, monitoring effectiveness of domestic institutional investors is very poor and foreign institutional investors play a significant role in constraining the discretion in financial reporting by virtue of their competency in deploying superior monitoring technology. This leads to our competing second proposition:

*Proposition-2: Foreign Institutional Investors have comparative advantage over their domestic peers in constraining Earnings Management by virtue of their ability to use superior monitoring technologies (Global Investor hypothesis).*

In the present study, we put forward both “hometown advantage hypothesis” and “global investor hypothesis” in the form of propositions for empirical testing in the Indian context. We have taken the non-financial listed companies in order to ascertain empirically which one of these two competing propositions is actually relevant in Indian context.

### **3. Data and methodology**

The present study has chosen all the non-financial listed companies in India having institutional investment of 20% or more from the year 2011 to 2018.<sup>2</sup> From the year 2011 to 2018, there are only 19,337 firm-years having the institutional investment which represents 3,165 firms. Out of the 19,337 firm-years, firm-years with 20% or more institutional investment are 1,993 representing 480 firm years. The empirical model uses independent variables and controlling variables with one-year lag. So, the final sample used in the empirical models filters out the firm-years which are not having the data in the immediately succeeding year. As a result, baseline model having total institutional holding as main independent variable (presented by Equations 9 and 10) has only 766 firm-years representing 301 firms. In the same way, the baseline model having DII and FII as main independent variables (presented by Equations 7 and 8) has only 553 firm-years representing 257 firms.

The data on the relevant variables required for the analysis have been collected from CMIE Prowess database. Estimation of discretionary accruals is made for each 2-digit NIC industrial classification for every year in the sample, because, as documented in the prior literature that industry characteristics have nontrivial impact on the accruals (Ayers et al., 2011).

#### **3.1. Measurement of earnings management**

In emerging markets like India, conservatism is an important measure of quality of financial reporting. Conservatism entails decreased opportunistic financial reporting and also lessens



information asymmetries. The measures of accrual-based earnings management also incorporate the conservatism. With reference to Chaney et al. (2011), Dechow et al. (1995), Jones (1991), Kim et al. (2016), the present study adopts the definition of current discretionary accruals and total discretionary accruals as a measure of earnings management.

**Measurement of Current Discretionary Accruals:** Current Accruals ( $CA_{it}$ ) is computed using the following equation<sup>3</sup>

$$CA_{it} = \Delta(\text{Current Assets})_{it} - \Delta(\text{Current Liabilities})_{it} - \Delta(\text{Cash})_{it} + \Delta(\text{Short term and Current Long Term Debt})_{it} \quad (1)$$

In Equation (1), for  $i$ -th firm and  $t$ -th time period,  $CA_{it}$  is Current Accruals;  $\Delta(\text{Current Assets})_{it}$  is change in current assets from  $t-1$ th period to  $t$ -th period, which includes cash and cash equivalents, trade receivables, inventory, prepaid expenses, and other current assets.  $\Delta(\text{Current Liabilities})_{it}$  is change in current liabilities from  $t-1$ th period to  $t$ -th period, which includes trade creditors, outstanding expenses and any other liabilities which have to be met within one year.  $\Delta(\text{Cash})_{it}$  is change in cash from  $t-1$ th period to  $t$ -th period, which includes cash and cash equivalents;  $\Delta(\text{Short term and Current Long Term Debt})_{it}$  is change in short-term and current long-term debt from  $t-1$ th period to  $t$ -th period, which includes any financial debt repayable within one year and also includes that portion of long-term debt which falls due in the current year and sinking fund requirements.

Next, we estimate Performance Adjusted Current Accruals (EPATCA) by using the following regression equation

$$\frac{CA}{\text{Asset}_{it-1}} = \beta_1 \frac{1}{\text{Asset}_{it-1}} + \beta_2 \frac{\Delta \text{netsales}_{it}}{\text{Assets}_{it-1}} + \beta_3 \text{ROA}_{it-1} + \varepsilon_{it} \quad (2)$$

In Equation (2),  $CA_{it}$  refers to Current Accruals of  $i$ -th company for year “ $t$ ”;  $\text{Asset}_{it-1}$  is one-year lagged value of total assets of  $i$ -th company;  $\Delta \text{netsales}_{it}$  denotes change in net sales from period  $t-1$  to  $t$ ;  $\text{ROA}_{it-1}$  is Return on Assets of  $i$ -th company in its one-year lagged form.

Next, we estimate Current Discretionary Accruals ( $CDA_{it}$ ) as the residuals of the regression model estimated as per Equation (2). With reference to extant literature (inter-alia, Ashbaugh et al., 2003; Chaney et al., 2011), estimation of  $CDA_{it}$  is made for each 2-digit NIC (National Industrial Classification) of every year in the sample as following:

$$CDA_{it} = \frac{TCA_{it}}{\text{Assets}_{it-1}} - E\left(\frac{TCA_{it}}{\text{Assets}_{it-1}}\right) \quad (3)$$

In Equation (3),  $\frac{TCA_{it}}{\text{Assets}_{it-1}}$  is actual current accruals and  $E\left(\frac{TCA_{it}}{\text{Assets}_{it-1}}\right)$  is estimated current accruals and  $CDA$  (i.e. current discretionary accruals) is the difference between actual current accruals and estimated current accruals (i.e., residuals).

**Measurement of Total Discretionary Accruals:** Total accruals are computed by adjusting depreciation with current accruals.

$$TA_{it} = \Delta(\text{Current Assets})_{it} - \Delta(\text{Current Liabilities})_{it} - \Delta(\text{Cash})_{it} + \Delta(\text{Short term and Current Long Term Debt})_{it} - \text{Dep}_{it} \quad (4)$$

In Equation (4),  $TA_{it}$  refers to total accruals;  $\text{Dep}_{it}$  refers to depreciation on the assets held of  $i$ th firm in year “ $t$ .” All the remaining variables are the same as in Equation (1). Next, Equation (5) is

used to estimate total discretionary accruals. In Equation (5), estimation of total discretionary accruals is made for each 2-digit NIC industrial classification of every year in the sample.

$$\frac{TA_{it}}{Assets_{it-1}} = \beta_1 \frac{1}{Assets_{it-1}} + \beta_2 \frac{\Delta REV_{it} - \Delta REC_{it}}{Assets_{it-1}} + \beta_3 \frac{PPE_{it}}{Assets_{it-1}} + \varepsilon_{it} \quad (5)$$

In Equation (5),  $TA_{it}$  refers to total accruals of  $i$ th company for year “ $t$ ”;  $Assets_{it-1}$  is one-year lagged value of total assets of  $i$ th company;  $\Delta REV_{it}$  denotes change in revenue;  $\Delta REC_{it}$  denotes change in receivables;  $PPE_{it}$  denotes property, plant, and equipment representing the tangible assets. The difference between actual total accruals and estimated total accruals is referred as “total discretionary accruals”.

$$TDA_{it} = \frac{TA_{it}}{Assets_{it-1}} - E\left(\frac{TA_{it}}{Assets_{it-1}}\right) \quad (6)$$

In Equation (6),  $\frac{TA_{it}}{Assets_{it-1}}$  is actual total accruals and  $E\left(\frac{TA_{it}}{Assets_{it-1}}\right)$  is estimated total accruals and TDA (i.e. total discretionary accruals) is the difference between actual total accruals and estimated total accruals (i.e. residuals).

The current discretionary accruals arise due to the difference between current assets and current liabilities excluding cash and cash equivalents. Current discretionary accruals will have their impact only on current period earnings. On the other hand, total discretionary accruals are measured after adjusting the current accruals with depreciation. Depreciation occupies major share in the total accruals of a firm, and depreciation policies are expected to have long-run implications on the reported earnings of a firm.

### 3.2. Measurement of institutional investment

The study uses three different variables to measure “institutional investment.” With reference to Ferreira & Matos (2008), and Kim et al. (2016), the institutional ownership was measured as the percentage of shareholdings of the institutional investors to the total shareholdings of the company. In the same way, DII was measured as a percentage of shareholdings of domestic institutional investors; Foreign Institutional Investment (FII) is measured as a percentage of shareholdings of foreign institutional investors; Total Institutional Investment (TII) is measured as a percentage of shareholdings of total institutional investors in the total outstanding shares held by the company. All the three measures of institutional ownership are measured at the end of each financial year.

### 3.3. Relationship of institutional investment with earnings management

Relationship of Institutional Investment with Earnings Management has been discussed extensively in Section 2. Here, we present the gist of the discussion as these are the two main variables of our interest: Institutional ownership has incentives and capabilities to foster the quality of financial reporting and constrains the discretionary reporting of earnings. Therefore, a negative association between institutional ownership and earnings management is expected (Ajay & Madhumathi, 2015; Chung et al., 2005). Domestic Institutional Investors will have geographical proximity not only to investee firm, but also to the stock research analysts, media, credit rating agencies etc. Due to this reason, they will have comparative advantage over Foreign Institutional Investors in terms of acquiring and processing the better information relating to the investee firm (K. H. Ayers et al., 2011; Bae et al., 2008; Kim et al., 2016; Liu et al., 2018). On the other hand, resilience from local political pressures and having arm’s length negotiations with investee firm enable stronger monitoring effectiveness of foreign institutional investors (Huang & Zhu, 2015). Hence, in brief, we expect negative relationship of earnings management with all kinds of institutional investments.

### 3.4. Relationship of earnings management with other control variables

It is obvious that earnings management is not only related to institutional investment and it is imperative to consider other (control) variables in order to estimate the precise relationship between earnings management and institutional investments. Consulting extant literature (e.g.

studies like Chung et al., 2002; Gopalan & Jayaraman, 2012; Kim et al., 2016; Klein, 2002; Xie et al., 2003), hypothesized relationship between the select controlling variables and earnings management is presented as follows

**Hypothesized Relationship between Variables used in the Empirical Model and Earnings Management**

**3.5. Empirical model used in the study**

The following four empirical models have been developed to test the hypothesized relationship of institutional ownership with earnings management while controlling firm-specific variables.

$$|CDA_{it}| = \alpha_0 + \beta_1 DII_{it-1} + \beta_2 FII_{it-1} + \gamma_1 SIZE_{it-1} + \gamma_2 ROA_{it-1} + \gamma_3 PBV_{it-1} + \gamma_4 GROWTH_{it-1} + \gamma_5 LEV_{it-1} + \gamma_6 STDVSALES_{it-1} + \gamma_7 CAPINTENSITY_{it-1} + \varepsilon_{it} \tag{7}$$

$$|TDA_{it}| = \alpha_0 + \beta_1 DII_{it-1} + \beta_2 FII_{it-1} + \gamma_1 SIZE_{it-1} + \gamma_2 ROA_{it-1} + \gamma_3 PBV_{it-1} + \gamma_4 GROWTH_{it-1} + \gamma_5 LEV_{it-1} + \gamma_6 STDVSALES_{it-1} + \gamma_7 CAPINTENSITY_{it-1} + \varepsilon_{it} \tag{8}$$

Variable	Description	Expected Relationship with Earnings Management	Supporting Literature
$TII_{it}$	Total Institutional Investment	Negative	(Chung et al., 2005; K. H. Bae et al., 2008; Ayers et al., 2011; Ajay & Madhumathi, 2015; Huang & Zhu, 2015; Kim et al., 2016; Liu et al., 2018).
$DII_{it}$	Domestic Institutional Investment	Negative	
$FII_{it}$	Foreign Institutional Investment	Negative	
$SIZE_{it}$	Size of the Firm	Negative	(Albrecht & Richardson, 1990; Lee & Choi, 2002; Siregar & Utama, 2008)
		Positive	
$ROA_{it}$	Return on Assets	Negative	(Kinney & McDaniel, 1989; DeFond & Park, 1997; Keating & Zimmerman, 1999)
$PBV_{it}$	Price-to-Book Ratio	Positive	(Lee et al., 2006; Sarkar et al., 2008)
$GROWTH_{it}$	Growth Opportunities	Negative	(Nissim & Penman, 2001; Penman & Zhang, 2002).
$LEV_{it}$	Leverage	Positive	(Bowen et al., 1981; Zmijewski & Hagerman, 1981; Daley & Vigeland, 1983; Johnson & Ramanan, 1988; Labelle, 1990; Malmquist, 1990)
$STDVSALES_{it}$	Standard Deviation of Sales	Positive	(Kim et al., 2016)
$CAPINTENSITY_{it}$	Capital Intensity	Negative	(Barton & Simko, 2002)

$$|CDA_{it}| = \alpha_0 + \beta_1 TII_{it-1} + \gamma_1 SIZE_{it-1} + \gamma_2 ROA_{it-1} + \gamma_3 PBV_{it-1} + \gamma_4 GROWTH_{it-1} + \gamma_5 LEV_{it-1} + \gamma_6 STDVSALES_{it-1} + \gamma_7 CAPINTENSITY_{it-1} + \varepsilon_{it} \quad (9)$$

$$|TDA_{it}| = \alpha_0 + \beta_1 TII_{it-1} + \gamma_1 SIZE_{it-1} + \gamma_2 ROA_{it-1} + \gamma_3 PBV_{it-1} + \gamma_4 GROWTH_{it-1} + \gamma_5 LEV_{it-1} + \gamma_6 STDVSALES_{it-1} + \gamma_7 CAPINTENSITY_{it-1} + \varepsilon_{it} \quad (10)$$

In Equation (7),  $|CDA_{it}|$  is the absolute value of current discretionary accruals estimated from Equation (2);  $|TDA_{it}|$  in Equation (8) denotes absolute value of total discretionary accruals estimated from Equation (4);  $DII_{it-1}$  is percentage of domestic institutional ownership;  $FII_{it-1}$  is percentage of foreign institutional ownership;  $TII_{it-1}$  is the total institutional ownership.  $SIZE_{it-1}$  denotes size of the company measured as log value of total assets;  $ROA_{it-1}$  denotes profitability measured as “Return on Assets”;  $PBV_{it-1}$  denotes Market Value Added, measured as “market-to-book value” ratio;  $GROWTH_{it-1}$  denotes growth opportunities for the company, measured as current year sales divided by one-year lagged value of sales;  $LEV_{it-1}$  stands for leverage, measured as debt-to-total asset ratio;  $STDVSALES_{it-1}$  denotes volatility of sales, measured as standard deviation of five years sales;  $CAPINTENSITY_{it-1}$  denotes capital intensity, measured as a ratio of current year “fixed asset to one year lagged total assets”.

#### 4. Results of the analysis

##### 4.1. Descriptive statistics of the variables

Table 1 shows the descriptive statistics of the variables used in the study. The mean value of  $CDA_{it}$  is 0.067 with a standard deviation of 0.103 while the mean value of  $TDA_{it}$  is 0.063 with a standard deviation of 0.099. Although the mean values of  $CDA_{it}$  and  $TDA_{it}$  are very closer, considerable difference in the standard deviation values can be observed. The maximum values of  $CDA_{it}$  and  $TDA_{it}$  are also very closer.

The mean value of  $TII_{it}$  is 32.561 and the median value is 30.860 and standard deviation is 9.586. The mean value of  $FII_{it}$  is 18.033 with a standard deviation of 11.337 while mean value of  $DII_{it}$  is 14.927 with a standard deviation of 10.351. The maximum value of  $FII_{it}$  is 79.650 while that of  $DII_{it}$  is 68.490.

For the other explanatory variables, except  $GROWTH_{it}$  (i.e.  $SIZE_{it}$ ,  $ROA_{it}$ ,  $PBV_{it}$ ,  $CAPINTENSITY_{it}$ ,  $STDVSALES_{it}$ ) the respective means and medians are close. Maximum and minimum values also do not indicate any extreme outliers.

##### 4.2. Correlation between variables

$TII_{it}$  and  $DII_{it}$  have negative correlation with  $CDA_{it}$  and  $TDA_{it}$ .  $FII_{it}$  has negative correlation with  $CDA_{it}$  and weak positive correlation with  $TDA_{it}$ . The negative correlation between  $FII_{it}$  and  $DII_{it}$  indicates that increase in FII flows on the average is associated with a decrease in DII flows and vice versa.  $LEV_{it}$  has positive correlation with  $CDA_{it}$  and  $TDA_{it}$ ; other controlling variables like  $SIZE_{it}$ ,  $ROA_{it}$ ,  $CAPINTENSITY_{it}$ ,  $STDVSALES_{it}$  and  $GROWTH_{it}$  have negative correlation with  $CDA_{it}$  and  $TDA_{it}$ . On the other hand,  $PBV_{it}$  has positive correlation with  $CDA_{it}$  and  $TDA_{it}$ . The signs of correlation coefficients of all the independent variables used in the model are in line with theory and prior literature, except the sign of correlation coefficient of  $STDVSALES_{it}$ .

Table Description: Table 1 shows the descriptive statistics of the variables used in this study. We report the mean, median, maximum, minimum, and standard deviation among others. All the variables have been defined in the appendix/table A.

Table Description: Table 2 shows the correlations between the variables used in this study. We report correlations along with the significance levels. All the variables have been defined in the appendix/table A.

**Table 1. Descriptive statistics of variables measuring earnings managements and its determinants**

	$CDA_{it}$	$TDA_{it}$	$TII_{it}$	$FI_{it}$	$DII_{it}$	$LEV_{it}$	$SIZE_{it}$	$ROA_{it}$	$PBV_{it}$	$CAP$ $INTENSITY_{it}$	$STDV$ $SALES_{it}$	$GROWTH_{it}$
Mean	0.067	0.063	32.561	18.033	14.927	1.455	10.844	3.587	3.883	0.263	8.242	0.038
Median	0.043	0.040	30.860	17.280	13.280	0.480	10.749	4.290	2.750	0.247	8.236	0.063
Maximum	1.280	1.267	52.552	79.650	68.490	54.640	13.594	10.080	38.510	0.903	11.321	2.232
Minimum	0.000	0.000	20.020	0.000	0.000	0.000	5.952	-33.776	0.090	-0.002	1.504	-2.860
Std. Dev.	0.103	0.099	9.586	11.337	10.351	4.320	1.460	6.669	4.460	0.197	1.680	0.349
Observations	811	811	811	811	811	811	811	811	811	811	811	811

**Table 2. Correlation between the variables measuring earnings managements and its determinants**

	$CDA_{it}$	$TDA_{it}$	$TII_{it}$	$FII_{it}$	$DII_{it}$	$LEV_{it}$	$SIZE_{it}$	$ROA_{it}$	$PBV_{it}$	Capital Intensity <sub>it</sub>	$STDV_{SALES_{it}}$	Growth <sub>it</sub>
$CDA_{it}$	1											
$TDA_{it}$	0.948***	1										
$TII_{it}$	-0.076**	-0.065*	1									
$FII_{it}$	-0.011	0.010	0.500***	1								
$DII_{it}$	-0.050	-0.059*	0.485***	-0.436***	1							
$LEV_{it}$	0.065*	0.070**	0.042	-0.021	0.107***	1						
$SIZE_{it}$	-0.055	-0.051	0.250***	0.248***	0.058*	0.049	1					
$ROA_{it}$	-0.092**	-0.095**	-0.120***	0.207***	-0.346***	-0.322***	-0.042	1				
$PBV_{it}$	0.184***	0.184***	-0.084**	0.116***	-0.186***	0.050	-0.178***	0.278***	1			
$CAPINTENSITY_{it}$	-0.162***	-0.177***	-0.087**	-0.200***	0.094**	-0.011	-0.114***	-0.023	-0.052	1		
$STDVSALES_{it}$	-0.063*	-0.083**	0.032	-0.066*	0.012	-0.123***	0.537***	0.117***	0.042	0.100***	1	
	-0.100**	-0.121***	-0.004	0.112***	-0.126***	-0.180***	0.086**	0.340***	0.105***	0.002	0.007	1

\*\*\*:indicates 1% level of significance; \*\*:indicates 5% level of significance; \* indicates 10% level of significance.



#### 4.3. Results of baseline regression analysis

Table 3 shows the results of pooled data OLS regression analysis done with Equations (7–10). The dependent variables are  $|CDA_{it}|$  and  $|TDA_{it}|$ , which denote absolute values of current discretionary accruals and total discretionary accruals respectively, derived from Equations (3) and (6). The main independent variables are  $FII_{it-1}$ ,  $DII_{it-1}$  and  $TII_{it-1}$  which indicate foreign institutional investment, domestic institutional investment and TII, respectively. The other controlling variables include  $LEV_{it-1}$  which indicates leverage measured as debt-to-equity ratio;  $SIZE_{it}$  is size of the firm measured as log value of total assets of the firm;  $ROA_{it}$  is return on assets;  $PBV_{it-1}$  is price-to-book value ratio;  $CAPINTENSITY_{it-1}$  denotes capital intensity which is measured as the ratio of tangible assets to total assets;  $STDVSALES_{it-1}$  denotes five preceding years rolling standard deviation of sales;  $GROWTH_{it-1}$  denotes growth in sales measured as current year sales divided by previous year sales. All the independent variables and controlling variables are introduced into the equation in their one-year lag form. \*\*\* indicates 1% level of significance; \*\* indicates 5% level of significance; \* indicates 10% level of significance.

The results of baseline regression disclose that TII, FII and DII have significant negative impact on both current discretionary accruals and total discretionary accruals. It indicates that 1% increase in FII will result in 0.10% lower “current discretionary accruals” and 0.094 lower “total discretionary accruals”. On the other hand, 1% increase in DII will result in 0.118% percent lower “current discretionary accruals” and 0.108% lower “total discretionary accruals.” Moreover, 1% increase in TII results in 0.131% lower current discretionary accruals and 0.107% lower total discretionary accruals. The findings of the analysis reveal that institutional investment constrains the management of accruals having both short-run and long-run implications. As the total discretionary accruals are influenced by depreciation which is having long implications on the reported earnings of the firms, the institutional investment constraints the firm from using depreciation policy as a tool to adopt earnings management. Apart from this, it also constraints the firms from managing the current assets and current liabilities to inflate or deflate the earnings to meet the earnings targets.

Shleifer and Vishny (1986) argue large size investment, made by the institutional investors, compel them to track and monitor the management of the firm, especially the quality of financial reporting. As the present study selects only the firm-years with minimum of 20% institutional investment, it emphasizes the positive impact on institutional investment size in constraining earnings management having both long-run and short-run implications. The results also reveal that the impact of TII is more on current discretionary accruals compared to the impact on total discretionary accruals. However, the impact of domestic and foreign institutional investment on current discretionary accruals differs marginally from the impact of same on total discretionary accruals.

The “wald” test results reveal that there is no significant difference in the impact of domestic and foreign institutional investment on current and total discretionary accruals. The prior literature (inter-alia, J. D. Coval & Moskowitz, 1999; K.-H. Bae et al., 2008; Ayers et al., 2011; Kim et al., 2016; Liu et al., 2018; Huang & Zhu, 2015; Kim et al., 2016; Lin & Fu, 2017; Harford et al., 2018; Tsang et al., 2019) argues that the relationship between diversity in institutional investment and earnings management is influenced by various factors. The next section of the paper discusses the moderating affect of such factors.

#### 4.4. Extension of the baseline results

The baseline results corroborate that institutional investment has significant negative impact on earnings management. The results also reveal that prima facie there is no significant difference in the negative impact of FII and DII on earnings management. However, to delve deeper into this and whether really there exists difference in the monitoring effectiveness of FII and DII, which is supposed to arise mainly due to the information asymmetric present in the market, the sample of firm-years is subdivided into two groups based on the median value of price to book value (PBV) ratio and regression models (7), (8), (9), and (10) are applied on the subgroups of the sample. Since the main reason for information asymmetry is the difference in cost of acquiring and processing the monitoring information

**Table 3. Impact of Institutional Investment on earnings management**

	Model -1		Model -2	
	DV: $ CDA_{it} $	DV: $ CDA_{it} $	DV: $ TDA_{it} $	DV: $ TDA_{it} $
$FII_{it-1}$	-0.100**		-0.094**	
$DII_{it-1}$	-0.118**		-0.108**	
$TII_{it-1}$		-0.131***		-0.107***
$LEV_{it-1}$	-0.001	0.000	-0.001	0.000
$SIZE_{it-1}$	0.007*	0.004	0.008*	0.005*
$ROA_{it-1}$	-0.003***	-0.003***	-0.002**	-0.002***
$PBV_{it-1}$	0.006***	0.005***	0.006***	0.005***
$CAPINTENSITY_{it-1}$	-0.064***	-0.068***	-0.075***	-0.074***
$STDVSALES_{it-1}$	-0.008**	-0.004	-0.009***	-0.006**
$GROWTH_{it-1}$	-0.013	0.003	-0.016	-0.007
Constant	0.096**	0.102***	0.093**	0.096***
Observations	553	766	553	766
R-Squared/Pseudo R-squared	0.095	0.104	0.098	0.109
Adj. R-Squared	0.080	0.094	0.083	0.100
F-Statistic	6.360***	10.928***	6.582***	11.599***
Wald Test	0.336712	NA	0.286185	NA

by domestic and foreign investors, the companies below the median value of PBV are assumed to have comparatively lower growth opportunities and so securities of such companies are not in the limelight of the investors and financial analysts. Hence, information acquisition and processing costs will be more for such firms. On the other hand, the companies above the median value are assumed to have comparatively higher growth opportunities and securities of such companies are usually in the limelight of the investors and financial analysts. So, one can easily acquire and process the information relating to such companies. Based on this premise, robustness of baseline regression results to the information asymmetry in the market is tested.

Table 4(A) shows the results of pooled data OLS regression analysis done with Equation (7) and Equation (8) by subdividing the sample into two groups. One is the firm-years having PBV ratio more than the median PBV ratio of the sample and the other group is having the firm-years with PBV ratio less than the median PBV ratio. The dependent variables are  $|CDA_{it}|$  and  $|TDA_{it}|$  which denote absolute values of current discretionary accruals and total discretionary accruals, respectively, derived from Equation (3) and Equation (6). The main independent variables are  $FII_{it-1}$  and  $DII_{it-1}$  which indicate foreign institutional investment and domestic institutional investment, respectively. The other controlling variables include  $LEV_{it-1}$  which indicates leverage measured as debt-to-equity ratio;  $SIZE_{it}$  is size of the firm measured as log value of total assets of the firm;  $ROA_{it}$  is return on assets;  $PBV_{it-1}$  is price-to-book value ratio;  $CAPINTENSITY_{it-1}$  denotes capital intensity which is measured as the ratio of tangible assets to total assets;  $STDVSALES_{it-1}$  denotes five preceding years rolling standard deviation of sales;  $GROWTH_{it-1}$  denotes growth in sales measured as current year sales divided by previous year sales. All the independent variables and controlling variables are introduced into the equation in their one-year lag form. \*\*\* indicates 1% level of significance; \*\* indicates 5% level of significance; \* indicates 10% level of significance.

Table 4(B) shows the results of pooled data OLS regression analysis done with Equations (9) and (10) by subdividing the sample into two groups. One is the firm-years having PBV ratio more than the median PBV ratio of the sample and the other group is having the firm-years with PBV ratio less than

**Table 4(A). Testing the robustness of the relationship between institutional investment and earnings management to the information asymmetry in the market**

	<b>Model -1- DV: <math> CDA_{it} </math></b>		<b>Model -2- DV: <math> TDA_{it} </math></b>	
	<b>Below the Median of PBV</b>	<b>Above the Median of PBV</b>	<b>Below the Median of PBV</b>	<b>Above the Median of PBV</b>
$FII_{it-1}$	-0.100**	-0.101	-0.078*	-0.107
$DII_{it-1}$	-0.060	-0.174**	-0.041	-0.176**
$LEV_{it-1}$	0.000	-0.002	0.000	-0.002
$SIZE_{it-1}$	0.009**	0.005	0.010**	0.007
$ROA_{it-1}$	-0.001*	-0.003**	-0.001	-0.003**
$PBV_{it-1}$	-0.001	0.006***	0.006	0.006***
$CAPINTENSITY_{it-1}$	-0.044*	-0.089**	-0.043**	-0.108***
$STDVSALES_{it-1}$	-0.004	-0.012**	-0.006**	-0.013***
$GROWTH_{it-1}$	-0.014	-0.011	-0.017	-0.013
Constant	0.034	0.164***	0.020	0.159***
Observations	211	342	211	342
R-Squared	0.093	0.114	0.109	0.115
Adj. R-Squared	0.052	0.090	0.069	0.091
F-Statistic	2.285	4.744***	2.731***	4.789***
Wald Test	-0.734	0.828	-0.731	0.784963

the median PBV ratio. The dependent variables are  $|CDA_{it}|$  and  $|TDA_{it}|$  which denote absolute values of current discretionary accruals and total discretionary accruals, respectively, derived from Equations (3) and (6). The main independent variable is  $TII_{it-1}$  which indicates TII. The other controlling variables include  $LEV_{it-1}$  which indicates leverage measured as debt-to-equity ratio;  $SIZE_{it}$  is size of the firm measured as log value of total assets of the firm;  $ROA_{it}$  is return on assets;  $PBV_{it-1}$  is price-to-book value ratio;  $CAPINTENSITY_{it-1}$  denotes capital intensity which is measured as the ratio of tangible assets to total assets;  $STDVSALES_{it-1}$  denotes five preceding years rolling standard deviation of sales;  $GROWTH_{it-1}$  denotes growth in sales measured as current year sales divided by previous year sales. All the independent variables and controlling variables are introduced into the equation in their one-year lag form. \*\*\* indicates 1% level of significance; \*\* indicates 5% level of significance; \* indicates 10% level of significance.

The results of the regression analysis on the companies with PBV below median value and above median value are presented in Table 4(A) and Table 4(B). The results reveal that for the sub-group of companies above the median of PBV, only DII has significant negative impact, but not FII. On the contrary, in case of subgroup of companies below the median of PBV, only FII has significant negative impact, but not DII. For the subgroup of above median companies, 1% increase in DII results in 0.174% decrease in current discretionary accruals and also 0.176% percent decrease in total discretionary accruals. On the contrary, for the subgroup of below median companies, 1% increase in FII results in 0.10% percent decrease in current discretionary accruals and also 0.078% percent decrease in total discretionary accruals. The impact of other controlling variables is qualitatively similar to the results of baseline regression model.

Based on the above results, it can be inferred that domestic fund managers prefer to invest in such stocks which are having less information asymmetry. As argued by the studies like Kim et al. (2016), domestic institutional investors have less effective technology in acquiring and processing the information compared to foreign institutional investors. So, they are motivated to invest in the stocks which have less information asymmetry in the market. Put it differently, it is not the

**Table 4(B). Testing the robustness of the relationship between institutional investment and earnings management to the information asymmetry in the market**

	<b>Model -1- DV: <math> CDA_{it} </math></b>		<b>Model -2- DV: <math> TDA_{it} </math></b>	
	<b>Below the Median of PBV</b>	<b>Above the Median of PBV</b>	<b>Below the Median of PBV</b>	<b>Above the Median of PBV</b>
$TII_{it-1}$	-0.081**	-0.173***	-0.060*	-0.146**
$LEV_{it-1}$	0.000	0.000	0.000	0.000
SIZE(-1)	0.004	0.005	0.007**	0.005
ROA(-1)	-0.002***	-0.002**	-0.002***	-0.002**
PBV(-1)	-0.001	0.005***	0.004	0.005***
Capital Intensity(-1)	-0.041*	-0.099***	-0.035*	-0.113***
LNSALES_STDDEV (-1)	-0.001	-0.008*	-0.004	-0.009**
SALES GROWTH(-1)	0.000	0.010	-0.010	-0.001
Constant	0.065**	0.145***	0.043	0.148***
Observations	310	456	310	456
R-Squared/Pseudo R-Squared	0.074	0.122	0.085	0.130
Adj. R-Squared	0.050	0.106	0.060	0.114
F-Statistic/Sparsity	3.013***	7.772***	3.477***	8.317***

geographical proximity, but the market efficiency which influences the comparative advantage domestic fund managers vis-à-vis foreign fund managers in monitoring the discretionary reporting by the investee firms. The results are consistent with the extant literature supporting hometown advantage hypothesis (inter-alia, J. D. Coval & Moskowitz, 1999; K.-H. Bae et al., 2008; Ayers et al., 2011; Kim et al., 2016; Liu et al., 2018).

The findings also proved that when information acquisition and processing costs are relatively high, monitoring effectiveness of DIIs is poor and foreign institutional investors play a significant role in constraining the discretion in financial reporting by virtue of their competency in deploying superior monitoring technology. As argued by Kim et al. (2016), foreign institutional investors acquire superior advantage in a corporate environment where agency conflicts are high and governance controls are very weak, which is a common phenomenon in many emerging markets like India. The stocks that exhibit more information asymmetry in the market likely to be characterized by poor corporate governance structure. In order to monitor such firms strongly in constraining the discretionary reporting, the institutional investors should have strong proclivity towards activism and also maintain independence and resilience to local political pressure. As argued by the extant literature foreign institutional investors possess which qualities more strongly compared to domestic institutional investors (inter-alia, Harford et al., 2018; Huang & Zhu, 2015; Kim et al., 2016). Besides, foreign institutional investors possess sophisticated cost-effective technology in acquisition and processing of monitoring information which provides them comparative advantage in monitoring the stock of investee firms which have more information asymmetry in the market. The findings are in line with extant literature supporting global investor hypothesis (inter-alia, Harford et al., 2018; Huang & Zhu, 2015; Kim et al., 2016; Lin & Fu, 2017; Tsang et al., 2019).

### 5. Conclusion and policy implications

As mentioned already, in Indian market, Ajay and Madhumathi (2015) have shown evidence on existence of active monitoring hypothesis beyond reasonable doubt. We have not only validated their findings with a broader dataset, but also extended their findings: companies which have lower information acquisition and processing costs (as represented by companies above the

median value of PBV), only DII has significant negative on earnings management. On the other hand, companies which have comparatively higher costs of information acquisition and processing (as represented by companies below the median value of PBV), only FIIs have significant negative impact on earnings management. Because of cost-effective modern monitoring technology, foreign institutional investors are at an advantage in this case. So, they can exhibit superior monitoring power in constraining earnings management. In other words, we find the existence of “home town advantage hypothesis” as well as “global investor hypothesis” simultaneously in the Indian context. In turn, we find the support for the conjecture that the difference in the monitoring effectiveness of FII and DII arises mainly due to the information asymmetric present in the market.

The findings of the study have substantiated the active monitoring hypothesis which was also evidenced by extant literature in India and other countries. It signifies that institutional investment improves the quality of financial reporting by constraining earnings management. Therefore, the regulatory environment of capital market should promote the institutional investment in companies in India. Over and above, our findings reveal that where the market is informationally not very efficient for the stocks of below median PBV, the domestic institutional investors are not playing a significant role in monitoring the discretionary financial reporting

The present study makes significant contribution to the existing knowledge in the area of earnings management. Theoretical contribution of the present study includes understanding the monitoring effect of divergent institutional investment on management of accruals having both long-run and short-run implications. The prior literature in Indian context focused mainly on the managing accruals having long-run implications (Ajay & Madhumathi, 2015; Sarkar et al., 2008, 2013; Varma, 1997). The present study is the first study in Indian context studying both short-run and long-run implications of accruals management. Most of the prior literature (Ajay & Madhumathi, 2015; Sarkar et al., 2008, 2013; Varma, 1997) has concentrated on the analysis of institutional investment as a whole. The present focuses on the impact of institutional investment size on monitoring the discretionary reporting. While supporting the active monitoring hypothesis in emerging markets like India, the present study also extends its contribution by testing the hometown advantage hypothesis and global investor hypothesis in Indian context.

Information asymmetry has its moderating effect on the relationship between various market variables. In the same way, it also affects the relationship between institutional investment and earnings management. The present study contributes to the extant literature by testing the moderating effect of information asymmetry on the relationship of TII, domestic and foreign institutional investment with the accruals management having long-run as well as short-run implications. So, the present study provides a holistic view on the monitoring effect of institutional investment in emerging markets like India.

Practical contribution of the present study includes motivating the institutional investors to play active role in monitoring the discretionary reporting. The findings of the study suggest that institutional investment has significant negative impact on earnings management. The findings also suggest that domestic institutional investors will be at advantage only in investing the firm with less information asymmetry in the market while the foreign institutional investors can enhance the value of the firms with more information asymmetry also. In other words, foreign institutional investment in the firms with more information asymmetry may result in improved quality of financial reporting and thereby, enhancing the market value of stocks of such firms. It also helps in internalization of such firms. Retail investors while selecting the firms for investment should see that firms with high information asymmetry should have more foreign institutional investment which helps in getting good quality financial information and also enhancing the value of the investment. Although institutional investment significantly constraints accruals management having short-run and long-run implications, its monitoring effect is lower in constraining the accruals management having long-

run implications. Hence, the market participants should take extra efforts in identifying the forces which can constrain such accruals management more strongly.

By understanding the insights into the comparative advantage of domestic and foreign institutional investors, the findings of the present study will be helpful in promulgating the policy initiatives which can improve the discipline of the companies in their financial reporting in order to minimize the managerial discretion. There is also a need for further research to get more insights into the comparative monitoring effectiveness of domestic and foreign institutional investors and driving forces behind such comparative advantage. In the light of increasing expectations on the institutional investors in improving the quality of corporate governance, the empirical research in this area gains more importance.

#### Funding

The authors received no direct funding for this research.

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#### Citation information

Cite this article as: Institutional ownership and earnings management: Evidence from India, Srikanth Potharla, Kaushik Bhattacharjee & Vishwanathan Iyer, *Cogent Economics & Finance* (2021), 9: 1902032.

#### Notes

- <sup>1</sup>Block-holder can be an organisation or Individual who owns substantially large amount of shares. Though, there is no any threshold level to classify a shareholder as block-holder, as per SEC guidelines, any shareholder holding 5% or more shares has to report to the SEC. So, block-holders can be institutional investor or any other shareholder holding large number of shares having influential voting power.
- The characteristics of financial companies differ from non-financial companies in terms of nature of their current assets, current liabilities and other operating assets. So, the prior literature does not take the financial and non-financial companies together in the analysis. Following the prior literature, the present study also takes into account only the non-financial companies for the analysis (Ajay & Madhumathi, 2015; Kim et al., 2016).
- Throughout in this section, the sub-scripts “it” (e.g.  $TCA_{it}$ ) refers to *i*-th firm for *t*-th time period (year). Also  $\Delta it$  (e.g.  $(\Delta \text{current liabilities})_{it}$ ) it implies change in the give components in the current period compared to their values in the previous period. ....

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### Appendix—A: Variables used in the Study and their Definitions

Variable	Description	Measurement
$CA_{it}$	Current Accruals	Estimated as per Equation (1)
$TA_{it}$	Total Accruals	Estimated as per Equation (4)
$CDA_{it}$	Current Discretionary Accruals	Estimated as per Equation (3)
$TDA_{it}$	Total Discretionary Accruals	Estimated as per Equation (6)
$TII_{it}$	% of Total Institutional Investment	Total institutional investment divided by total shareholdings of the firm
$FII_{it}$	% of Foreign Institutional Investment	Shares held by FIIs divided by the total shareholdings of a firm
$DII_{it}$	% of Domestic Institutional Investment	Shares held by DIIs divided by the total shareholdings of a firm
$SIZE_{it}$	Size of the Firm	Log value of total assets
$ROA_{it}$	Return on Assets	Net Profit divided by total assets
$PBV_{it}$	Price-to-Book Ratio	Market Price of a share divided by book value of the share
$GROWTH_{it}$	Growth in Sales	Current year sales divided by previous year sales.
$LEV_{it}$	Leverage	Ratio of Debt to Equity
$STDVSALES_{it}$	Standard Deviation of Sales	Rolling standard deviation computed based on five preceding years values of sales
$CAPINTENSITY_{it}$	Capital Intensity	Tangible Assets divided by Total Assets



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