

ROLE OF CREDITORS IN MONITORING EARNINGS QUALITY: A STUDY ON INDIAN FIRMS

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Abstract *In this study, we examine how debt financing in general and bank borrowings in particular affect the earnings quality (EQ) at Indian firms. We conducted an empirical analysis, taking a sample of 626 Indian non-financial firms from 2003 to 2021. Our sample comes from the food and agro-based industry, which is divided into four relatively homogenous groups. On each of the groups, we apply an industry-wise cross-sectional version of the modified Jones model (Dechow et al., 1995) for estimating discretionary accruals (DACC), a measure of EQ. Testing the hypotheses using industry fixed effects for four sub-sectors, we found that bank financing is negatively associated with DACC (positively associated with EQ), whereas non-bank loans affect positively. We interpret this as a sign of discretion applied by opportunistic managers of borrowing firms to showcase a good financial position for reducing the cost of covenant violation. Further, the age, size and performance of the firms are positively related to EQ, while growth opportunity has a negative impact, as expected. The study is helpful for lenders and stakeholders to make policies and minimise their exposure to credit risk.*

Keywords: *Earnings Quality, Discretionary Accrual, Debt Financing, Debt Covenant, Agency Theory*

INTRODUCTION

This study addresses the issue of whether debt financing helps improve the earnings quality (EQ) of borrowers. Hasan et al. (2012) suggested, after studying 8,022 US bank loan contracts, that there is a major impact of earnings predictability on the bank lending contracts as well as their terms and conditions. The reason is that “lending is relationship driven” and a contract for lending is beneficial for both borrowers and lenders. The contract is mired in agency costs when the managers of borrowing firms exercise discretion in reporting the financial position to the lenders. Lenders, on their part, exercise due diligence before lending and monitor the books until the loans are serviced. The culture has developed in the last three decades and moved from a single lender to syndication among multiple lenders. Thus, it gives greater access to capital, allows non-bank players to access this market, allows loans of longer tenure and also allows borrowers with low credit quality. These features of this loan market increase the risk exposure for banks. In India, it's apparent from academic studies, research reports and market commentary. A significant increase in the amount of non-performing assets has been seen over the

years (Gandhi, 2014). Sahoo and Majhi (2022), documented by a review of past studies, found that private-sector banks are able to manage non-performing assets (NPAs) better than public-sector banks, which face the problem of political turmoil. As such, banks perform due diligence before sanctioning loans or enhancing credit limits (Ganguli & Deb, 2021). They establish the rate of interest and other conditions on a case-by-case or firm-by-firm basis after assessing the credit risks. They verify the value of collateral, profitability, cash flow forecast, governance and repayment capability of borrowing firms. The process enables lenders to access books of accounts and other reports and records for verification. So, it is expected that the higher the bank loan amount, the better the EQ. However, studies by Gale and Hellwig (1985) and Hart and Moore (1998) said that corporate creditors act passively until the firm defaults. For that, we could also expect a negative relationship between the two if proper due diligence is not done.

From a theoretical perspective, debt financing or bank financing helps to reduce the agency problem through strict credit appraisal, better credit quality and better monitoring by outsiders, that is, creditors and bankers. But empirical evidence shows the role of large creditors to be scarce

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(Shleifer & Vishny, 1997). Thus, researchers have two kinds of views about the relationship between debt financing and EQ as well as covenant violation with EQ. Some found debt affecting earnings management (EM) positively as creditors demanded a higher quality of information (Salehi et al., 2017). Jha et al. (2015) hypothesised that public or government banks are more inefficient monitors than private banks, but found the opposite result, that is, EM is higher where the primary or major lender is a private bank or bank loans are the major source of finance. However, covenant violations or payment defaults give similar control rights to the creditors, like claiming the principal amount immediately or stopping providing loans (Nini et al., 2012). The quest is to investigate whether they play their role as strictly as documented.

The study on a sample of Spanish firms by Rodriguez-Perez and Hemmen (2010) shows that debt has a negative impact on discretionary accruals (DACC) in non-diversified firms. But diversification helps firms mitigate the effect of debt on EM. They also depicted a positive association between the two when firms try to avoid debt covenant violations in some common-law countries like the US and France.

We have taken Indian non-financial firms to address the issue for the following reasons. Firstly, the Indian debt market is one of the largest in Asia, and after liberalisation, it is growing enormously. But there are many impediments to the growth of the secondary market, like information asymmetry, a smaller number of active participants, the absence of a loan sales platform, etc. So, the Indian banking sector, that is, government and private, continues to fulfil most of the financing requirements of business enterprises. Indian firms usually raise long-term finance through term loans from banks. The issue is, Indian banks have faced many frauds and losses of crores of rupees in the last decade. As per the study by the Reserve Bank of India (2017), “the interest coverage ratio has fallen steeply from 3.8 to 2.9 times for non-financial and non-governmental companies.” And the declining trend was observed across all strata of companies and sectors. It is evident that non-performing assets are eroding the performance of banks to a large extent (Agarwal et al., 2021), and this increasing trend of NPAs in PSBs also raises a serious concern. Singh and Antony (2016) found from the literature that a credit boom occurs at least after three banking crises, which indicates the association between relaxed credit expansion policies and crises. Indian firms continuously face issues in repaying debts. Studying the determinants of NPA in Indian banking sector, Chawla and Rani (2021) argued that the better the bank’s regulation and management, the better the asset standard. Therefore, banks are supposed to keep an eye on the borrowers to limit the amount of NPA. Based on data that indicates a low rate of growth in the number of new loan disbursements in the

financial year 2020, we expect banks to become stricter on these lines. So, we propose a negative relationship between debt financing and EM.

Using both listed and unlisted Indian firms coming under the same 2-digit National Industrial Classification (NIC) code, we conducted our analysis. Taking accrual-based earnings management (EM) as a proxy for earning quality (EQ), the relationship with debt financing is being studied over a period of 20 years. The current article uses the least squares dummy variable approach to analyse the relationship and examine the heterogeneity among the sectors under food and agro-based industries. A study on the food processing industry done by Desai and Desai (2019) found some factors affecting long-term borrowings, such as cash flow, tangibility, profitability, growth and liquidity. We aim to study the relationship of accruals, and especially DACC, with borrowings. The study contributed the following to the literature/particular area of issue: the sectors are different in terms of accounting behaviour, and the finance raised from outsiders does not help curb EM in Indian non-financial firms.

The background and literature reviews are given in the next section, while subsequent sections explain the research design, findings of the study and discussion of the results. Later in this article, we give our concluding remarks on this field of research.

REVIEW OF LITERATURE

Various incentives exist for firms engaging in EM activities. We can summarise those as: to attract investors, avoid debt covenants, avoid taxes, obtain finance, etc. (Rahman, Moniruzzaman & Sharif; 2013; Jimbalvo, 1996; Othman & Zeghal, 2006). The practices and reasons behind them vary from firm to firm, sector to sector and country to country. Our literature survey is basically based on the body of research that focuses on the relationship between debt financing and EM.

Accruals Quality and Bank Debt

Banks are more effective in monitoring borrowers than other lenders, for example, public debtholders, due to their closer relationship with the firms (Fama, 1985; Diamond, 1984 & 1991) and their ability to design and redesign contracts according to the characteristics of the borrower (Bharath et al., 2008). In their view, banks have an informational advantage and monitor borrowers at a lower cost because they are delegated monitors. The monitoring also improves alignment among managers and shareholders, which helps reduce the agency cost. On the other hand, accounting reports of accurate information reduce the moral hazard and

information asymmetry related to borrowers (Garcia et al., 2014). More accurate earnings lower the information risk.

Taking a sample of 1,063 US firms from 1988 to 2001, Ahn and Choi (2009) found an increase in the strength of bank monitoring lowered the EM of borrower (firms). They have measured the strength of bank loans by the magnitude and duration of the bank loan. While the rank of the lead bank is also considered as an important factor. Bank debt financing signals a positive view of borrowers' EQ as well as creditworthiness. Garcia et al. (2014) also found a positive relationship between accruals quality and bank debt to total assets when studying Spanish small and medium enterprises. From the studies, we can say debt financing partly determines EQ.

However, if we see the bonding and agency theories or such arguments, we will rather find that managers in corporations achieve incentives in reporting higher quality earnings when they have higher private debts than public debts. In this case, they apply discretion in reporting just to maximise the value of the firm (Ghosh & Moon, 2010; García-Teruel et al., 2014). Ghosh and Moon (2010) have given both concordant and contrasting views on the relationship. The contracting view says that low debt has a positive influence on EQ as managers, acting in the interest of debt holders, use their discretion to provide private information. The contrasting view says debt has a negative effect on EQ. The higher amount of debt gives more incentive to opportunistic managers to use their discretion and make reporting decisions that reduce the likelihood of debt covenant violations. Rodriguez-Perez and Hemmen (2010) found that an increase in debt leads to an increase in earnings manipulation when firms diversify to avoid the control exercised by the lenders. In this context, Laux (2017) concludes that "managers misreport to avoid the violation and retain control rights." Using different real EM proxies, Crabtree, Mahar and Wan (2014) found that bond rating agencies as well as investors see real EM negatively.

Some studies state that "bank loan is preferable over public debt in the presence of asymmetric information." By showing precise earnings, the information risk reduces and debt contracting terms also improve, as well as the likelihood of providing collateral (Bharath et al., 2008). Firms do manage earnings following a debt covenant violation to improve their bargaining power in renegotiation, even if they cannot avoid becoming in default (DeFond & Jimbalovo, 1994). This is also evidenced by Jha et al. (2015) using quarterly data of Indian-listed firms. These arguments support a negative relationship between bank-debt financing and EQ and accrual quality. Hence, accounting manipulation reduces the controlling power of lenders by reducing the ability of covenants.

Ganguli and Deb (2021) claimed a two-way relationship between debt and EQ. Higher EQ leads to higher credit quality and lesser default risk, whereas higher borrowing

forces the firms to report better. They found this relationship to be negative, which means firms tend to use discretion to avail higher credit limits and longer terms. They also argued that the collateral played a vital role in accessing debt instead of EQ.

Accruals Quality and Other Determinants

A large body of research used firm age, firm size, firm performance, firm growth and leverage as controlling factors for EQ as well as EM. The studies focusing on debt covenants and debt financing have also used these and include collateral, Altman Z, book-to-market ratio, operating cycle and interest expenses as determining factors.

Firm size is a major determinant of misreporting. Managers use the presence of information asymmetries in larger firms as an advantage and use their discretion in reporting (Othman & Zhegal, 2006). While studying the firms listed on the Tehran stock exchange, Salehi et al. (2017) stated that public firms are generally larger and "financially constrained" than small and medium-sized firms. They also documented that access to the capital market or external market also determines the EQ. We expect a negative relationship between firm size and EM.

Elzahaby (2021) found a negative association between leverage and corporate governance, firm performance and EQ, while drawing a positive relation between firm performance with EQ and governance quality. He suggested that highly leveraged firms tend to engage in EM practices. Mostafa (2020) also found ineffectively performing firms to engage in EM in comparison to effectively performing firms in the context of Egypt. So we also propose a positive relationship between profitability and EQ.

The theory says that firms with higher cash holdings or operating cash flow do not opt for EM. Nguyen et al. (2021) took operating cash flow as a control variable and found a negative association with DACC.

Taking firms given a "D" rating by Indian rating agencies, Agrawal and Chatterjee (2015) documented that firms going through severe financial distress, measured by the Altman Z-score and distance to default, tend to show a lower level of EM and vice versa.

Hypothesis

Considering the options for raising debt and the literature, our proposition would be a higher EQ for firms with higher amounts of debt and with multiple lenders. But we argued that the presence of multiple lenders with lesser expertise in comparison to banking or financial institutions would

not help curb discretionary behaviour. Hence, following the agency theory, we propose that the percentage of bank loans in the total borrowings will help get the managers more inclined towards fulfilling the shareholder's interest. Further, other determinants like firm age, size, performance, profitability and other firm and industry characteristics are considered as determinants of EM.

H1: Total borrowings have a positive impact on EM after controlling for firm characteristics.

H2: Borrowings from banks have a negative impact on EM considering other control variables.

H3: Borrowings other than bank loans have no impact on EM.

RESEARCH METHODOLOGY

Sample Design

We focus on food and agro-based industries (NIC code: 10) from India because of their importance to the Indian economy

and their relatively simple business model. We limit the time period to all financial years after 2002, as the records before 2002 are not digitised by the Registrar of Companies, and therefore, the data is scant. The study is robust, as the sector has a limited number of exogenous variables, resulting in a reasonably homogeneous sample.

The data for all firms under food products, tobacco products and other agro-based products were collected. The categories "other food products" and "other agro-based products" consist of a heterogeneous list of firms that are different in nature. So, we excluded those from the study. From the selected sectors, we took firms that had a minimum of five years of data, which is required for measuring the DACC. We got 626 firms for the selected period, that is, 2002–2021, which is shown in detail in Table 1. While estimating abnormal accrual, we removed some observations in terms of outliers. As accrual models require lag year data, the models could be built only for 2003–2021. We had 6,137 firm years remaining for the final analysis after all cleaning and excluding variables list-wise while running the regressions.

Table 1: Sample Description (for the Period 2002-2021)

		Number of Firms
Food and Agro based Manufacturing Industries		2058
Companies of "Coffee", "Beer & Alcohol", "Other food products", "Tobacco", Floriculture and "Other agro based industries" are not included		(1053)
Food products (2-digit NIC code:10)	Dairy Products (1050 & 1412)	138
	Sugar (1072)	224
	Vegetable Oils (1040 & 1080)	401
	Tea (1079)	242
Firms excluded due to insufficient financial data for measuring (not having minimum of 5 years of data)	Dairy	(63)
	Sugar	(91)
	Vegetable Oils	(162)
	Tea	(63)
Total firms		626

Model Specification and Description of Variables

To estimate the association of debt financing with EQ, we developed the following least square dummy variable models with DACC as the regressor:

$$DACC = \alpha + \beta_1.borrowings + \beta_2.age + \beta_3.size + \beta_4.growth + \beta_5.performance + \beta_5.cfo + \varepsilon$$

$$DACC = \alpha + \beta_1.bank\ loans + \beta_2.age + \beta_3.size + \beta_4.growth + \beta_5.performance + \beta_5.cfo + \varepsilon$$

$$DACC = \alpha + \beta_1.non_bank\ loans + \beta_2.age + \beta_3.size + \beta_4.growth + \beta_5.performance + \beta_5.cfo + \varepsilon$$

The dummies for different sectors are included. Such as Ind_dummy1 where 1 for dairy and 0 for others, Ind_dummy2 where 1 for sugar and 0 for others, Ind_dummy3 where 1 for tea and 0 for others, Ind_dummy4 where 1 for vegetable oils and 0 for others. While running the regression, we excluded one dummy variable to avoid estimation bias. Borrowings, bank loans and non-bank loans are taken as operational definitions of debt financing; age, size, growth, the cash flow from operations (CFO) and performance are

used as controls. Controlling factors capture the effect of innate components like internal environments and business characteristics. Total borrowings consist of all kinds of long-term loans, both public and private. Bank borrowings (bank loans) are the amounts borrowed from banks, and non-bank borrowings (non-bank) are calculated by subtracting bank borrowings from the total borrowings. We used this measure to capture the role of other creditors in the discretionary component of earnings. All debt proxies are scaled by total assets.

The most frequently used proxy for covenants is the debt/equity ratio, that is, leverage. Earlier studies used leverage as a measure of covenant, for example, Beneish (1999), but failed to find the close association between leverage and misstatements reported by Accounting and Auditing Enforcement Releases, probably because leverage is a noisy proxy of covenant, as stated by Fields et al. (2001) and Dichev and Skinner (2002). Pittman and Zhao (2020) used a refined measure of covenant restriction, which consists of 15 financial covenants. Here we have used the total borrowing and bank borrowings as covenants, following previous studies (Garcia-Teruel et al., 2014; Rodríguez-Pérez & Van-Hemmen, 2010).

Among other variables, firm age (age) is measured as the log of age (years till the study period), firm size (size) as the log of total assets, CFO is the cash flow from operating activities divided by total assets, and performance is the return on assets taken as it is from Prowess. The firm's growth is calculated as the change in sales over the previous year's sales.

Measurement of Earnings Quality

There are various models and proxies to measure EM and EQ. Here, the cross-sectional model of Dechow, Sloan and Sweeney (1995) is used to estimate the model for each sub-sector for each year. The residuals of each regression capture

the abnormal accrual. We also tried taking the return on assets as an explanatory variable, as suggested by Kothari et al. (2005). The significance of the models improved, but we took residuals from both models for further analysis.

Dechow et al. (1995) modified the Jones model and compared it with several other models using simulation. This modification, given in the below equation, was shown to be more powerful than the original model. This improvement is on account of the removal of non-cash sales (increase in receivables), which is clearly a discretionary item.

$$Total\ Accruals_t = \alpha + \beta_1 \cdot \Delta REV_t - \Delta REC_t + \beta_2 \cdot PPE_t + \varepsilon_t$$

Total accruals (TA_t) is measured from the equation: $[(CA_t - CA_{t-1}) - (CASH_t - CASH_{t-1}) - (CL_t - CL_{t-1}) + (STD_t - STD_{t-1}) - DEP_t]$. Where, CA = current assets, $CASH$ = cash holdings, CL = current liabilities, STD = short-term debt, DEP = depreciation and t indicate the year. ΔREV is the change in the value of sales for the period, ΔREC is the change in receivables and PPE is the gross plant, property and equipment. All items are scaled by lagged total assets to remove the heteroscedasticity problem. The error term represents the discretionary part of the model, which is considered a proxy for EM. If it is higher, the EQ will be lower.

EMPIRICAL FINDINGS

Table 2 shows the descriptive statistics for all the variables included in the main analysis for different sub-sectors. Here we have shown both the directional and non-directional discretionary accruals (NDDAC). Out of four, the size (number of firms) of vegetable oils is large, and the spread of directional discretionary accrual (DDAC) is also more. The firms under tea are the oldest among all. The standard deviation of borrowings, bank loans and CFO are high as they are unscaled. We have scaled them for the regression analysis. There is heterogeneity among sub-sectors, so we have considered the least squares dummy variable panel regression model.

Table 2: Descriptive Statistics for All Sectors

Descriptive Statistics						
Sector		N	Min	Max	Mean	Std. Deviation
Dairy	T_Borrowings	741	1.1	19746.30	1107.67	2317.09
	Bank loans	741	0.1	13807.8	815.21	1780.53
	CFO	584	-2755.8	7839.8	209.73	746.64
	DDAC	654	-2.55	0.44	-0.01	0.18
	NDDAC	654	0	2.55	0.12	0.14
	Age	741	1	81	22.39	13.48
	Size	741	2.64	10.58	6.72	1.55
	Performance	677	-104.84	39.78	1.73	9.44

Descriptive Statistics						
Sector		N	Min	Max	Mean	Std. Deviation
Sugar	Growth	711	-26.1	11.9	0.44	1.74
	T_Borrowings	1761	9.5	72839.1	3199.77	6456.12
	Bank loans	1761	0.2	70223	2271.84	4961.72
	CFO	1519	-15315.1	22827.3	354.27	1597.71
	DDAC	1607	-3.41	1.68	-0.01	0.20
	NDDAC	1607	0	3.41	0.11	0.16
	Age	1761	1	97	31.87	24.95
	Size	1761	3.11	11.96	7.92	1.28
Tea	Performance	1657	-62.81	76.99	-0.90	8.42
	Growth	1632	-2.3	4.1	0.09	0.38
	T_Borrowings	1895	0.5	73391.1	767.34	3982.84
	Bank loans	1895	0.1	72595	521.01	3182.65
	CFO	1576	-6018.3	8814.9	82.81	558.18
	DDAC	1707	-1.13	1.54	-0.01	0.15
	NDDAC	1707	0	1.55	0.09	0.12
	Age	1895	1	145	65.89	36.25
Vegetable Oil	Size	1895	2.21	12.09	5.75	1.65
	Performance	1777	-129.14	41.35	-2.16	13.46
	Growth	1791	-7.2	7	0.11	0.50
	T_Borrowings	2075	0.5	30573.8	1039.72	2551.50
	Bank loans	2075	0.1	20747.9	656.98	1571.91
	CFO	1515	-17751.5	19736	195.44	1456.37
	DDAC	1831	-3.62	3.36	0.01	0.26
	NDDAC	1831	0	3.62	0.14	0.21
	Age	2075	1	72	20.74	11.81
	Size	2075	0.74	12.84	6.52	1.71
	Performance	1899	-553.85	861.22	0.34	28.18
	Growth	1927	-19.9	18.6	0.47	1.53

The correlation coefficients between DACC and other variables used in the model are shown in Table 3. Total borrowings of firms are positively related to DACC which is also significant at the 1% level. Bank borrowings are negatively associated, whereas non-bank borrowings are positively associated with the discretion applied by managers. The correlation analysis supports our proposition for bank loans. But the significant relationship between non-bank borrowings rejects our hypothesis.

Age, firm size and CFO have a negative relation with DACC that is statistically significant. The firm growth opportunity calculated based on the change in sales has a positive association with EM. The coefficient of performance is also showing a positive association.

The estimation of multivariate pooled ordinary least square (OLS) regression considering industry fixed effects is

shown in Table 4. We have estimated three models to stress the impact of each of the three proxies of debt financing on our dependent variable, that is, DACC. We took four dummy variables for four sub-sectors to account for their heterogeneity. The least-squares dummy variable model shows they are quite heterogeneous, as the coefficients are significant.

We checked VIF (Variance Inflation Factor) values to detect whether a multicollinearity problem exists. The value lies below 5 for all variables. Our model explains around 6.5% of the variations in EM, as indicated by adjusted R square. We found positive and significant coefficients for the proxy of debt financing, total borrowings, which declares that with higher debt, more is the EM and lower is the EQ. In the first model, the relationship with total borrowings is shown, which is positive considering all other firm characteristics.

It indicates that managers make accounting choices to raise both public and private credits. From the second model, the coefficient of bank borrowings is negatively significant, and our hypothesis is not rejected. The relationship indicates that bank loans have a negative effect on managers' discretionary behaviour. The result shows a positive impact of non-bank loans on DACC. Here we reject our hypothesis

and believe that lenders other than banks are not efficient monitors and firms use discretionary behaviour to avoid the covenants. Our findings are in line with the work by Ganguli and Deb (2021) to some extent. While they documented a negative impact of EQ on bank loans, we found bank loans also affected the discretionary behaviour of Indian firms in the food processing industry.

Table 3: Pearson Correlation among Independent Variables and with DACC

		NDDAC	T_Borrowings	Bank Loans	Non-Bank Loans	Age	Size	CFO	Performance	Growth
NDDAC	R	1								
	Sig. (2-tailed)									
T_Bor- rowings	R	.131**	1							
	Sig. (2-tailed)	0								
Bank loans	R	-.044**	-.105**	1						
	Sig. (2-tailed)	0.001	0							
Non-bank loans	R	.044**	.105**	-1.000**	1					
	Sig. (2-tailed)	0.001	0	0						
Age	R	-.118**	-.038**	-.087**	.087**	1				
	Sig. (2-tailed)	0	0.002	0	0					
Size	R	-.127**	-.130**	.179**	-.179**	-.055**	1			
	Sig. (2-tailed)	0	0	0	0	0				
CFO	R	-.065**	-.068**	-0.007	0.007	0.015	0.015	1		
	Sig. (2-tailed)	0	0	0.599	0.599	0.277	0.272			
Perfor- mance	R	.179**	-.070**	.026*	-.026*	-0.021	0.019	.209**	1	
	Sig. (2-tailed)	0	0	0.037	0.037	0.095	0.122	0		
Growth	R	.065**	-.062**	0.021	-0.021	-.141**	-.072**	-0.009	.061**	1
	Sig. (2-tailed)	0	0	0.11	0.11	0	0	0.55	0	

** p-value significant at 1% level.

* p-value significant at 5% level.

The firm age and size are significantly negative, and growth is positive in all of the models, which is in line with the extant literature (e.g., Al-Fayoumi et al., 2010; Wang, 2006;

Gamra & Ellouze, 2021). We found the effect of performance and CFO to be negative and significant on EM, which also supports some of the literature on emerging nations.

Table 4: Results of Regression Analysis

	Model 1	Model 2	Model 3
Constant	.209***	0.231***	0.215***
T_Borrowings	.015***		
Bank loan		-0.017**	
non-bank loan			.017**
Age	-.007**	-0.008***	-.008***
Size	-.009***	-0.009***	-.009***
Growth	.010***	0.01***	.010***

	Model 1	Model 2	Model 3
CFO	-.041***	-0.042***	-.042***
Profitability	-.002***	-0.002***	-.002***
N	4696	4696	4696
R squared	0.067	0.066	0.066
Adj R squared	0.065	0.064	0.064
Sector dummy	Taken	Taken	Taken

*** p-value significant at 1% level.

** p-value significant at 5% level.

Analysis for Robustness

To check the robustness of our analysis, we took another measure of DACC, as suggested by Dechow and Dichev (2002). After doing tests and regression analysis, we found almost the same findings as our earlier findings. Even with a modification of proxies for other variables, the relationships remain consistent. We have not shown the findings here for brevity.

DISCUSSION

Based on the agency theory, we hypothesised a negative relation between bank debt and EM for Indian corporations. On the basis of the findings, we did not reject our proposition that banks are more efficient monitors than other non-professional lenders. The outcomes are in line with Leuz et al. (2003) that EM is more prevalent in countries like Asia and Continental Europe, where regulations to protect the interests of outsiders are not stringent. Hence, insiders easily obfuscate the earnings for incentives. Butt, Chamberlain and Sarkar (2016) who evidenced that firms use EM to avoid debt covenant violations, focused both on the quarter of the violation and the quarter following it.

Indian managers, displaying opportunistic EM, use their discretion to reduce the cost of debt covenant violations, and at a higher level of debt financing; they are likely to behave aggressively for accruals. But this strategy does not work for professional financiers like banking institutions. Indian banks are continuously updating their policies and key monitoring activities. As a result, the firms that take more finance from banks show better EQ. But behave opportunistically while availing loans from creditors other than banks. However, bank borrowing is not very efficient in determining behaviour as the coefficients are too small. Managers also have other incentives to act aggressively. The study will be helpful for stakeholders and outside lenders to analyse and implement strict rules and policies to reduce the discretionary behaviour of managers.

Our finding that the existence of bank borrowing is associated with better quality has implications for other stakeholders, such as fund managers, equity analysts, shareholders, and other financiers. These stakeholders can benefit from better monitoring by banks that lend to a company. This externality also plays a role in improving the overall investment climate.

Our study sheds light on the role played by creditors beyond the supply of credit and monitoring. While banks meet the expectations of scrutinising the underlying earnings process, non-bank financiers need to upgrade their methods and judge the firms from the accrual point of view as well. The study also has implications for managers working for Indian firms to not opt for discretionary behaviour while aiming for bank credit as banks limit access to firms with higher earnings management.

CONCLUSION

The studies on EM—detecting the motivation and curbing it—have been in vogue for over two decades. The current article studies the role of bank financing and compares it with non-bank long term financing, and we found bank financing to help curb EM behaviour. To avoid the consequences of covenant violations, firms manage earnings and exploit accounting choices. We plan to continue the study to better understand the behaviour during distress, measured using distance to default or other metrics. Another possible extension could be in other jurisdictions where better compliance with debt covenants is prevalent.

Further, there are many other determinants that motivate managers to manage earnings. Those are not in the scope of this study. Those intentions and how they play can also be examined and must be for an inclusive study. The study has shown the picture for the entire period of 20 years. This is one of the longest-running and most specific (to a sector) studies in this field of research in the Indian context. The whole period can also be divided into different phases of the economic cycle or based on RBI regulations. And we plan to extend our study along those lines. There are many other

factors or firm characteristics that can be tested and included in the model for a more robust study.

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