Article

Shariah compliance and earnings management in India: Insights on reporting transparency and financial stability

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Abstract: The present study examines the impact of earnings management on financial stability and reporting transparency among Shariah and Shariah-non-compliant firms in India from 2008 to 2023. The Study uses Kothari and Roychodhury models to estimate earnings management proxies. Earnings manipulation and bankruptcy of the sample firms were estimated using Beneish's M-score and Altman's Z-score models. The Study reveals that compared to non-Shariah firms, the Shariah-complaint firms are less prone to earnings management and bankruptcy, and it was also found that they are more transparent in reporting their results. Overall, the study confirms that more than a religious indexation, Shariah screening is effective in maintaining ethical conduct of business practices that enhance the protection of investors. The findings of this study aid managers in policy formulations, and it will be helpful for potential investors in making investment decisions based on Shariah principles.

Keywords: Shariah Index, Islamic finance, reporting transparency, financial stability, earnings management

1. Introduction

The discussion and debates on earnings management began in the early 1980s. The concept of earnings management (Hereafter EM) was coined for the first time by (1985), who defined EM as a purposeful intervention in the financial statements by managers to either mislead some stakeholders or to influence contractual outcomes. He is considered the pioneer in EM research who found the influence of bonus schemes in the accrual policies of insiders. Later, (1988) developed an accrual model for the first time that addressed the presence of unexpected accruals in managing the provision for doubtful debts. However, Earnings Management research has gained momentum following the introduction of the discretionary accrual estimation model by Jones (1991), who found evidence for income decreasing tendency among US firms during import relief investigations. Later, Dechow (1995) incorporated financial performance aspects into the Jones model, which is more effective in detecting earnings management. Thus, it is evident even from the early 90s that earnings management affects the credibility of financial statements (Beneish,1999). Because, interventions made by the insiders in the reported figures for their gains have created an information asymmetry between the insiders and the public (Beatty & Harris, 1999). Such insider interventions were mainly made for higher credit rating Gounopoulos and Pham (2022), better IPO proceeds (DuCharme & Malatesta, 2001; Abraham & Kumar, 2023), meeting analysts forecasts (Abarbanell & Lehavy, 2003), non-violation of debt covenants (Franz et al., 2014) and so on. However, aggressive EM practices by insiders have resulted in poor performance (Rangan, 1998), bankruptcy (Durana et al., 2021), and adverse stock returns (DuCharme, 2004) in the long run.

The issue of earnings management has become a global issue since the bankruptcy in the United States, such as Enron, WorldCom, and Xerox, and failures such as Parmalat in Italy, AIH in Australia, Flowtex in Germany, and Royal Ahold in the Netherlands (Desai & Dharmapala, 2009; Yusoff, & Muhamad, 2015). The key reason behind these corporate failures was the mismanagement of accruals by the managers. Such discretionary practices by the managers can create an information asymmetry and influence the decisions of potential investors (Aharony et al., 1993). Following these corporate scandals, legislations such as the Sarbanes-Oxley Act (SOX) Act 2006 in the USA, Kodex – corporate governance code in Germany, Tabaksblat in the Netherlands, and corporate governance code at the regional and international level were enacted to protect potential investors from the threat of information asymmetry. However, introducing International Financial Reporting Standards (IFRS) is a milestone in synchronizing a unique financial reporting mechanism (Tendeloo & Vanstraelen, 2005; Rudra & Bhattacharjee, 2012). All these legislations are mechanisms that are ultimately aimed at the protection of investors.

Apart from these legislations, Shariah law is considered one of the prominent religious codes that focuses on the ethical conduct of business and probits unclear and fraudulent business transactions. So, Shariah-compliant firms are relatively better than non-Shariah firms at disclosing their reported earnings (Kazemian et al., 2018). Ibrahim et al. (2015) also provided evidence of lower earnings management among firms dealing in Islamic products and services. Kamarudin and Sarman (2015) also found evidence for higher earnings quality among Sharia-compliant firms. So Shariah Shariah-compliant firms are considered a symbol of optimism among potential investors due to their earnings quality aspects. As far as Islamic finance is concerned, it is an emerging concept at the international level. As per the World Bank report in 2022, Shariah-compliant financial assets are estimated at roughly US$3.2 trillion, covering bank and non-bank financial institutions, capital markets, money markets, and insurance. At the global level, various indices like the FTSE Shariah World Index (FTSWORLDS) and S&P Global BMI Shariah are addressing Shariah investment compliances. About a quarter of the world's population is represented by Muslims, and the compilation of Shariah practices in corporate finance has brought investors to make investments in Shariah-complaint firms (Omran,2009).

In the Indian scenario, the concept of Shariah indexation in corporate finance has gained momentum since the compilation of the Shariah index in 2008 with the base year of 2006. Currently, the National Stock Exchange (NSE) calculates 3 three Shariah indices: NIFTY50 Shariah, NIFTY500 Shariah, and NIFTY Shariah 25, all referred to as their parent indices. Generally, Shariah-compliant firms are considered ethical in their operations due to their thrust of religious codes and regulatory screening for Shariah compliances. To the best of our knowledge, this is the first study in India that analyzes the managerial discretions among the Shairah-indexed firms and its impact on earnings manipulation and bankruptcy since the compilation of the Shariah index 2008.

Most of the studies regarding EM and Shariah concentrate on the Middle East, North Africa, and other countries with Islamic orientations. In such countries, the concept of lower leverage, lower cash holding, and lower receivables reduces the scope for managerial discretion (Obid & Demikha, 2011). Even though the Shariah law is considered a symbol of ethics and morality, Shariah indexation is also used to create confidence among the public to attract more investments (Suffian et al., 2015). However, the quality of reported figures is relatively higher in countries with significant religious influence (Abdullah, 2012). So, the present study will contribute to the existing literature by analyzing the association between the Shariah-indexation and managerial discretionary practices. We use a sample of 101 firms (out of which 49 Shariah complaint firms and 52 non-Shariah complaint firms) over the period 2008-2023 to make a comparative analysis of earnings management behavior among the Shariah and non-Shariah compliant firms since the compilation of Shariah index in the Indian capital market. The Study reveals that compared to non-Shariah firms, Shariah-complaint firms are less prone to earnings

management and bankruptcy and are more transparent in reporting their results. Also, the Shariah-complaint companies are less prone to managerial discretions using the accruals and real-based transactions.

The remainder of the paper is structured as follows: Section 2 discusses the literature review, Section 3 presents the objective and methodology, Section 4 presents the result and discussions, and Section 5 presents the study's conclusion.

2. Literature review

As per Dow Jones, a Shariah-compliant firm is supposed to have a lower leverage ratio, low business receivables, and low cash holdings. Previous studies show that firms with lower leverage ratios, low business receivables, and low cash holdings are less prone to earnings management practices (Bukit & Nasution, 2015). For instance, Becker et al. (1998) posit that managers use accruals to overstate their earnings while entering into debt contracts. Likewise, Richardson and Waegelein (2002) found that debt covenants lead to aggressive earnings management practices (DeFond & Jiambalvo, 1994). To avoid such debt covenant default, firms with higher leverage ratios engage in discretionary practices (Dechow et al., 1995; Beatty & Weber, 2003). Thus, it is evident from previous literature that firms with low leverage ratios are less prone to earnings management practices (Lazzem & Jilani, 2018). Another component in Shariah compliance is account receivables, and it is evident that firms with more account receivables are more prone to earnings manipulations (Marquardt & Wiedman, 2004). Managers use deferred revenues and business receivables to inflate their earnings to make a positive picture in the market (Brown & Caylor, 2009). So, as per the existing literature, accounting receivables create more flexibility in managing the financial statement (Gandhi, 2020). Thus, Shariah-compliant firms are believed to have lower levels of account receivables. Regarding the cash component in Shariah compliance, Shariah forbids surplus cash holdings beyond the limits, involvement in interest, or the use of cash as assets and the trading of money (Ashraf, 2016). Firms with surplus cash holdings will face agency problems by undertaking infeasible projects for personal gains, over-investment, and mismanagement of funds (Tsui et al., 2001). Such firms will also use income-increasing mechanisms to hide the negative impact of infeasible projects (Chung et al., 2005). So, Islamic investors only invest if they believe the investments do not conflict with Shariah (Derigs & Marzban, 2008). So, Shariah-compliant firms are subject to strict scrutiny from investors as they will expect reliable and relevant information while making an investment decision that has both economic and religious positions among Islamic investors (Haniffa et al., 2004; Ali & Al-Owaihan, 2013). Thus, a Shariah-complaint firm must maintain its status by ensuring high-quality reported earnings (Wan Ismail et al., 2015).

However, Alsaadi et al. (2017) argue that firms are highly motivated to be included in the Sharia index to attract more investments and not due to their abidance with Shariah principles. Shariah membership creates an impression of transparency and can influence the perception of investors who abide by the Shariah principles (Hemingway & Maclagan, 2004). Thus, it is inconclusive that Shariah compliance does not constrain managerial incentives in discretionary practices. (Arsad et al., 2015) also found that the quality of accruals in religiously influenced firms is lower as compared to socially responsible firms. (Scholtens and Kang, 2013) also confirmed that firms with relatively good CSR scores are less prone to earnings management. So, the extent of earnings management practices has no connection with religion (Callen et al., 2011). However, the inner urge for personal gains constantly threatens the quality of financial reports due to insider practices (Muñoz et al., 2021). So, the firms also manage their earnings to improve CSR scores for better valuation in the market (Prior et al., 2008). Thus, even the religious indexation does not free the firms from earnings management practices. Suffian et al. (2015) found evidence for earnings manipulation as there is a significant affiliation of opportunistic behavior with EM among Shariah-compliant firms. Jannah and Faturohman (2019) also found the presence of income-increasing accruals in Sharia-compliant firms. Ameraldo et al. (2022)

also posited that Shariah compliance is ineffective in mitigating earnings management behavior. To enhance the market performance valuation indicators, even the Shariah firms tend to manage their reported figures (Isa et al., 2013). Thus, Due to the EM behavior among Shariah-compliant firms, financial analysts cannot make any value-relevant buy or sell recommendations (Farooq, 2014). Then, Ahmed and Farooq (2018) found an asymmetric impact of volatility behavior among the Shariah portfolios in the Middle East and North Africa region. Also, Ammer and Alsahlawi (2018) showed that the status of Shariah compliance and Muslim directorship failed to make accurate IPO earnings forecasts. Sutainim and Kamaluddin (2019) posit that over-estimating sales using accruals signals evidence of earnings manipulation among Shariah-complaint firms. Manipulation of earnings hurts long-term performance (Qoyum et al., 2022) and future stock returns (Jackson & Rountree, 2017). One of the primary reasons behind the manipulation of earnings is not to violate any debt covenant, as it has diverse effects on the firm prospects (Wang & Zheng, 2020). Such earnings manipulation paves the way toward bankruptcy due to the shrinking of the financial prospects of the entity (Nareswara & Dewiyanti, 2023; Mućko & Adamczyk, 2023). Even though there are various bankruptcy prediction models, the manipulation of accounting figures affects the accuracy and effectiveness of such econometric models (Rizki, 2023; Sinaga & Rahma, 2023). However, information regarding earnings management can enhance the predictive power of bankruptcy models (Séverin & Veganzones, 2021).

Research on Shariah compliance in the Indian scenario is scarce and gives contradictory results. Recently, (Farooq et al. N., 2022) found that Shariah-compliant firms have higher levels of stock price synchronicity than non-compliant firms. In another study, the Performance of the Shariah index was compared with the general index, and it found that the performance of both indices was relatively consistent (Munusamy & Natarajan, 2012). In another study regarding Islamic finance, Singh and Aggarwal (2019) found that companies with larger sizes and higher growth rates in the Nifty 500 Shariah index significantly comply with Islamic finance aspects. Dawar (2015) posits that cash flows of Shariah-compliant firms in the current year have more predictive ability regarding cash flows in the next year than aggregate earnings in the current year. Likewise, Nobi et al. (2019) documented that firm size, growth rate, and board independence are the major factors that influence compliance with Islamic finance among Indian corporates. Thus, the literature on Shariah compliance and earnings management is minimal and demands further research in the Indian scenario. As far as the Indian capital market is concerned, it is the largest IPO market in the world, which makes this study more relevant in addressing the quality of reported figures. Because retail investors are looking at the reported figures while making their investment decisions. In India, apart from being just a religious indexation, Shariah law is considered a moral code with ethical bindings. So, potential investors assume investing in Shariah stocks is relatively safer and ethical. To the best of our knowledge, since the compilation of the Shariah Index 2008, no comprehensive studies have addressed the earnings management behavior among Shariah-indexed firms in the Indian scenario. Thus, the present study is an attempt to analyze the earnings management behavior among the Shariah-complaint and Shariah-non-compliantfirms in India from 2008 to 2023 by incorporating various aspects such as the reporting transparency and earnings manipulation that affect the credibility of financial statements and the confidence of potential investors.

3. Data and methods

3.1. Data and variables

3.1.1. Sample

As per the Shariah principles, a non-Shariah company is an entity that engages in alcohol, tobacco, and alcohol business having debt to equity ratio greater than or equal to

33% and account receivables to market equity greater than or equal to 49% (Derigs & Marzban, 2008). Thus, the revenue generation from non-permissible sources of Shariah-compliant firms should not exceed 5% of their total income (Samori & Rahman, 2013). The Study uses the Nifty 250 Small-Cap index as the study population. The SEBI DRG Study reports that Small firms in India indulge relatively more in earnings management (10.6 percent of the total assets) than medium and large-size firms (Ajit et al., 2013). So, the present study analyzes the discretionary practices among the Shariah and Shariah-non-compliant small-cap companies in India. After eliminating companies in the financial sector and companies with non-availability of data, the final sample for the study stood at 101 companies (out of which 49 Shariah complaint firms and 52 non-Shariah complaint firms). Financial and accounting data of the sample firms for the estimation of Earnings management (EM) models, Altman Z score, and Beneish M-Score were extracted from the Prowess IQ CMIE (Centre for Monitoring Indian Economy) database from 2008 to 2023. Index-related data were retrieved from the National Stock Exchange (NSE) website (https://www1.nseindia.com).

3.1.2. Variables and proxies for estimation of AEM and REM

Various variables and proxies for the estimation of AEM (Hereafter et al.) and REM (Hereafter et al.) models, along with their descriptions and sources, are shown in Table No. 1.

Table 1. Variables and proxies for estimation

Variable	Indicator	Description
Sales	Revenue Growth	Change in sales
Receivables	Credit Sales	Non-cash sales during the period
Total assets	Size of the firm	Lagged total assets
POPE	Tangible Assets	Property, Plant & Equipment
Abn PROD	Proxy for REM	Abnormal production cost
Abn CFO	Proxy for REM	Abnormal cashflow from operations
Abn DISX	Proxy for REM	Abnormal Discretionary expenses
DA	Proxy for AEM	Discretionary Accruals

This table shows the variables used to estimate AEM and REM using the Kothari (2005) model and Roychowdhury (2006) model.

3.1.3. Estimation Models for AEM and REM

Accrual data is not directly observable from the financial statements. So, to estimate both AEM and REM, we need to calculate the value of various proxies, which is estimated using cross-sectional regressions. Here, Discretionary accruals (DA), the proxy for AEM, will be calculated using the Kothari (2005) model by adding Return on Assets (ROA) with the Modified Jones model (Dechow et al., 1995).

$$NDA = \alpha_0 + \frac{\alpha_{1it}}{Assets_{it-1}} + \alpha_2 \frac{\triangle Sales_{it}}{Assets_{it-1}} + \alpha_3 \frac{PPE_{it}}{Assets_{t-1}} + \alpha_4 ROA_{it} + \varepsilon_{it} \qquad (1)$$

α_1, α_2, and α_3 are firm-specific parameters for year t; ΔREV is the change in revenues scaled by total assets; ΔREC is the change in receivables scaled by total assets; PPE is the gross property, plant, and equipment scaled by total assets; and ROA is added to control the earnings performance of the companies.

Total accruals are taken as the difference between Total income before excluding extraordinary items and Cash flow from operations, and total assets also scale total accruals.

$$TA = \text{Total Income (TI)} - \text{Cashflow from operations (CFO)} \qquad (2)$$

Discretionary Accruals (DA) are calculated as the difference between non-discretionary accruals (NDA) and Total Accruals (TA).

$$DA = NDA - TA \qquad (3)$$

The estimation of REM is based on the Roychowdhury (2006) model. The value of REM is the aggregate value of three subproxies: Abnormal cash flow from operations (Abn_CFO), Abnormal Production cost (Abn_PROD), and Abnormal discretionary expenses (Abn_DISX).

Abnormal Cashflow from operations (Abn_CFO). Firms can increase (decrease) sales by offering massive discounts (higher prices) or aggressive (conservative) credit policies. So, an increase (decrease) in Abn_CFO will be considered evidence for upward (downward) REM practices. The residual of the following model (4) measures A_PROD.

$$\frac{CFO_{it}}{A_{it-1}} = \beta_1 \left[\frac{1}{A_{it-1}}\right] + \beta_2 \left[\frac{Sales}{A_{it-1}}\right] + \beta_3 \left[\frac{\Delta\, Sales_{it}}{A_{it-1}}\right] + \varepsilon_{it}, \tag{4}$$

where the CFO is cash flow from operations. A denotes total assets, Sales is revenue, and ΔSales is the change in revenue from period t-1 to t. Residuals (εit) measure A_CFO.

Abnormal Production cost (Abn_PROD). Firms can increase (decrease) net profits by decreasing (increasing) the cost of goods sold. They do so by engaging in over (under) production because increased (decrease) production spreads fixed overhead costs over a larger (smaller) number of units, which results in reducing (increasing) the fixed costs per unit. Here, abnormal production costs' positive (negative) value implies upward (downward) REM. The residual of the following model (5) measures A_PROD.

$$\frac{PROD_{it}}{A_{it-1}} = \beta_1 \left[\frac{1}{A_{it-1}}\right] + \beta_2 \left[\frac{Sales}{A_{it-1}}\right] + \beta_3 \left[\frac{\Delta\, Sale_{it}}{A_{it-1}}\right] + \beta_4 \left[\frac{\Delta\, Sales_{it-1}}{A_{it-1}}\right] + \varepsilon_{it}, \tag{5}$$

where PROD is production costs measured as the sum of the cost of goods sold and change in inventory.

Abnormal discretionary expense (Abn_DISX). Firms can increase (decrease) net profits by decreasing (increasing) their non-operating expenses. For instance, they cut (spend) on discretionary expenditures such as advertising expenses, research and development, and selling, general, and administrative (SG&A) expenses. Accordingly, the negative (positive) abnormal discretionary expenditure indicates firms' upward (downward) REM activity. The residual of the following model (6) measures A_DISX.

$$\frac{DISEXP_{it}}{A_{it-1}} = \beta_1 \left[\frac{1}{A_{it-1}}\right] + \beta_2 \left[\frac{Sales}{A_{it-1}}\right] + \varepsilon_{it}, \tag{6}$$

where DISX is the sum of discretionary expenses consisting of SG&A and R&D. REM is the sum of Abnormal Cash flow (A_CFO), Abnormal production cost (A_PROD), and Abnormal discretionary expenses (A_DISX). So, both AEM and REM are based on various proxies, and they are aggregated to incorporate the effect of Total Earnings Management (TEM):

$$TEM = AEM + REM \tag{7}$$

3.1.4. Estimation of Earnings Manipulation Using Beneish M-Score

One of the significant challenges investors face is ensuring the quality of financial statements (Agyei-Mensah, 2019). The quality of every financial statement is based on its transparency, which is affected by the manipulation of reported figures (Jonas & Blanchet, 2000). Such manipulation in financial reporting creates an information asymmetry between the insiders and investors that affects their investment decisions (Herath & Albarqi, 2017). The m-score propounded by Beneish (1999) is considered one of the prominent methodologies in detecting earnings manipulation in financial statements based on earnings quality. M-score is an aggregate value of 8 financial ratios that analyze the financial statement from various dimensions such as Sale receivables, Gross margin, Asset Quality, Sales growth, Depreciation, Discretionary expenses, Accruals, and Leverage. If the value of the M-score is greater than -2.22, we can stipulate that earnings are manipulated.

$$\begin{aligned} M-score = &-4.480 + (0.920 * DSRI) + (0.528 * GMI) + (0.404 * AQI) + (0.892 * SGI) \\ &+ (0.172 * DEPI) + (0.115 SGAI) + (4.679 * TATA) + (0.327 * LEVI). \end{aligned}$$

$$(8)$$

The description of various ratios used in estimating the M-score is illustrated in Table 2.

Table 2. Variables used in the estimation of M-score and Z-score

Indicator/Variable	Measurements	Interpretation
DSRI (Day et al.)	$\dfrac{\text{Account Receivable}_t/\text{Sales}_t}{\text{Account Receivable}_{t-1}/\text{Sales}_{t-1}}$	DSRI reveals the amount of inflated revenue using receivables
GMI (Gross et al.)	[(Sales(t−1)−COGS(t−1))/Sales(t−1)]/[(Sales(t)−COGS(t))/Sales(t)]	Firms with lower prospects for growth are likely to manipulate
AQI (Asset et al.)	$\dfrac{\{1 - \dfrac{\text{Current Assets}_t + \text{PPE}_t + \text{Total Long Tem investments}_t}{\text{Total Assets}_t}\}}{\{1 - \dfrac{\text{Current Assets}_{t-1} + \text{PPE}_{t-1} + \text{Total Long Tem investments}_{t-1}}{\text{Total Assets}_{t-1}}\}}$	AQI > 1 reveals the increase in intangibles or deferred cost
SGI (Sales et al.)	$\dfrac{\text{Sales}_t}{\text{Sales}_{t-1}}$	Higher value of SGI reveals manipulation in sales
DEPI (Depreciation Index)	$\dfrac{\{\dfrac{\text{Depreciation}_{t-1}}{\text{PPE}_{t-1} + \text{Depreciation}_{t-1}}\}}{\{\dfrac{\text{Depreciation}_t}{\text{PPE}_t + \text{Depreciation}_t}\}}$	Lower depreciation indicates income-increasing manipulations
SGAI (Selling et al. Index)	$\dfrac{(\text{SGA expenses}_t/\text{Sales}_t)}{(\text{SGA expenses}_{t-1}/\text{Sales}_{t-1})}$	Value of SGA beyond 1 indicates manipulation in discretionary expenses
LEVI (Leverage Index)	$\dfrac{\{\dfrac{\text{Current Liabilities}_t + \text{Long term debt}_t}{\text{Total assets}_t}\}}{\{\dfrac{\text{Current Liabilities}_{t-1} + \text{Long term debt}_{t-1}}{\text{Total assets}_{t-1}}\}}$	LEVI will close to 1 if there is no significant variation in short-term liabilities and non-current debt or total assets
TATA (Total Accruals to Total Assets)	$\dfrac{(\text{Revenue}_t - \text{Cashflow}_t)}{\text{Total assets}_t}$	Higher TATA indicates a higher degree of managerial discretion
X1	Net working capital / Total Assets	Utilization of working capital
X2	Retained earnings / Total assets	Ploughing back of profit
X3	EBIT / Total assets	Operating efficiency of the firm
X4	The market value of equity / Total debts	Market competitiveness
X5	Sales / Total assets	Efficiency in generating revenue

Note: This table illustrates the calculation of various indicators and variables used in estimating Z-score and M-score.

3.1.5. Estimation of bankruptcy using Altman Z-score

Every firm in the capital market may exploit investor sentiments through various parameters such as credit rating, IPO grading, Governance score, and so on. However, such certifications are based on third-party assessments, such as CARE, CRISIL, ICRA, etc. Insiders of the companies try to enhance third-party certifications by withholding or exaggerating certain information from the general public to exploit the opportunities in the capital market (Demirtas & Cornaggia, 2013). When a company manipulates its reported figures to enhance its public image, it adversely affects the investors' confidence as it results in poor performance of firms in the long run. So, to analyze an entity's financial stability, Edward Altman (2017) has propounded a composite score comprising five ratios: working capital, retained earnings, Operating profit, Market value of equity, and sales. Hence, the Altman Z-score is based on various performance ratios and effectively predicts bankruptcy. The value of the Z-score is interpreted as if Z is more significant than 2.67,

then it is considered to be "safe"; if Z is between 1.81 and 2.67, then it is in the "grey" category, and if the value of Z is less than 1.81 then it is in the "distress" category.

$$Z - \text{score} = 1.2\,X1 + 1.4\,X2 + 3.3\,X3 + 0.6X4 + 1.0\,X5. \tag{9}$$

Description of various ratios used in estimating Z-score are illustrated in Table 2.

Apart from the variables mentioned in Table. 2 we have to control some other factors that will affect earnings management and manipulation. So, some control variables included in the regression analysis are as follows:

1. Firm Size: Firms engage in EM practices regardless of size (Habib et al.,2013). As per the SEBI DRG study 2013, large-cap firms tend to manage their earnings less due to their governance structure. However, higher agency cost among large-cap companies results in opportunistic behavior (Bassiouny et al., 2016). Analyst forecasts and expectations of investors also tend to manipulate their reported figures (Ali et al., 2015).
2. Firm Age: Old and established firms' reputations reduce discretionary earnings management practices (Bassiouny et al., 2016). But recently, studies have also come up with evidence for EM practices irrespective of their ages (Debnath, 2017)
3. Current Ratio (CR): Investors and the general public expect a positive relationship between the current ratio and EM, which induces the firm to maintain the existing ratio or to increase the same result in the opportunistic behavior of insiders (Moradi et al., 2012).

The study uses various regression models to analyze the association between AEM (Accrual et al.), REM (Real et al.), and TEM (Total et al.), and the indicators of earnings manipulation are as follows:

$$\text{AM} = \beta_0 + \beta_1 \text{DSRI}_{i,t} + \beta_2 \text{GMI}_{i,t} + \beta_3 \text{AQI}_{i,t} + \beta_4 \text{SGI}_{i,t} + \beta_5 \text{DEPI}_{i,t} + \beta_6 \text{SGAI}_{i,t} + \beta_7 \text{LEVI}_{i,t} + \beta_8 \text{TATA}_{i,t} + \beta_9 \text{Z score}_{i,t} + \beta_{10} \text{Firm Size}_{i,t} + \beta_{11} \text{Firm Age}_{i,t} + \beta_{12} \text{Current ratio} + \varepsilon_{i,t}, \tag{10}$$

$$\text{REM} = \beta_0 + \beta_1 \text{DSRI}_{i,t} + \beta_2 \text{GMI}_{i,t} + \beta_3 \text{AQI}_{i,t} + \beta_4 \text{SGI}_{i,t} + \beta_5 \text{DEPI}_{i,t} + \beta_6 \text{SGAI}_{i,t} + \beta_7 \text{LEVI}_{i,t} + \beta_8 \text{TATA}_{i,t} + \beta_9 \text{Z score}_{i,t} + \beta_{10} \text{Firm Size}_{i,t} + \beta_{11} \text{Firm Age}_{i,t} + \beta_{12} \text{Current ratio} + \varepsilon_{i,t}, \tag{11}$$

$$\text{TEM} = \beta_0 + \beta_1 \text{DSRI}_{i,t} + \beta_2 \text{GMI}_{i,t} + \beta_3 \text{AQI}_{i,t} + \beta_4 \text{SGI}_{i,t} + \beta_5 \text{DEPI}_{i,t} + \beta_6 \text{SGAI}_{i,t} + \beta_7 \text{LEVI}_{i,t} + \beta_8 \text{TATA}_{i,t} + \beta_9 \text{Z score}_{i,t} + \beta_{10} \text{Firm Size}_{i,t} + \beta_{11} \text{Firm Age}_{i,t} + \beta_{12} \text{Current ratio} + \varepsilon_{i,t}. \tag{12}$$

4. Results and discussion

Table 3 illustrates the descriptive statistics, such as mean, median, standard deviation, Minimum, and maximum, of various indicators and variables used in the study. All the indicators have a positive mean and are clustered around the centralized value, meaning the values are normally distributed. DSRI has the lowest mean value, whereas GMI indicates the highest level of deviation.

The descriptive statistics results also depict that the entire sample mean values of AEM, REM, and TEM are positive. Hence, total sample descriptive statistics can only give an overview of the results. We have used the mean difference t-test to analyze whether there is any significant difference between the Shariah and Shariah-non-compliant firms, and the results of the mean difference t-test are shown in Table 6.

Table 3. Descriptive statistics (entire sample companies)

Variable	Mean	Median	S. D	Min.	Max.
AEM	1.245	0.926	0.675	-0.073	1.316
REM	0.463	0.175	1.001	-0.055	0.545
TEM	1.041	0.605	1.351	0.231	1.061
DSRI	0.402	0.233	0.910	0.002	0.947
SGI	.907	0.893	0.617	0.824	1.191
AQI	1.105	0.974	0.915	0.067	1.162
GMI	1.218	1.026	1.711	0.615	1.298
DEPI	0.946	0.791	0.752	0.517	1.345
SGAI	1.092	0.872	0.905	0.386	1.075
LEVI	1.217	1.074	1.131	0.186	1.231
TATA	0.957	0.531	0.933	0.626	1.569

Table 4 presents the correlation matrix of various indicators and variables used to estimate earnings management proxies, financial distress, manipulation, and control variables.

Table 4. Correlation matrix

	AEM	REM	TEM	DSRI	GMI	AQI	SGI	DEPI	SGAI	LEVI	TATA	Z-score	Firm size	Firm age	CR	VIF
AEM	1															
REM	.120	1														1.21
TEM	.217	.146	1													1.13
DSRI	.259	-.041	.293	1												1.25
GMI	.042	.137	.110	-.018	1											1.04
AQI	.410	-.319	.037	.037	.201	1										1.09
SGI	.033	.068	.189	.121	.171	.045	1									1.11
DEPI	.017	.085	.067	.001	.104	.326	.046	1								1.17
SGAI	.051	.007	.021	.059	-.115	.062	.157	.028	1							1.27
LEVI	.196	.208	.074	.033	.052	.148	.031	.075	.091	1						1.32
TATA	.231	-.044	.316	.165	.083	.261	.194	-.026	.086	-.031	1					1.07
Z score	-.073	.068	.022	.094	.037	.182	.087	.072	.061	.028	.105	1				1.15
Firm size	-.016	.027	.045	.051	.046	.073	.014	.054	-.034	.101	.037	.261	1			1.22
Firm age	-.020	-.081	-.007	.048	.099	.113	-.038	.021	.059	.097	.031	.091	-.056	1		1.26
CR	.077	.049	.052	.097	-.130	.051	.159	-.065	.017	.064	-.180	.016	.088	.041	1	1.19

The findings of the Pearson correlation coefficient reveal that AEM and AQI have the highest correlation coefficient (.410), and it is within the limit of (0.8), which posits that there is no issue of multicollinearity (Hair et al., 2014). The mean value of VIF (1.19) also confirms the absence of multicollinearity. Results of the correlation coefficient also report that the financial distress proxied by Altman Z-score has a negative coefficient with AEM, and indicators such as DSRI, AQI, and TATA are negatively correlated with REM. As far as the control variables are concerned, firm age has a negative correlation with all the measures of earnings management.

5. Univariate analysis

The magnitude of earnings manipulation and probability of bankruptcy among non-Shariah and Shariah-compliant firms are presented in Table 5. Beneish M-score is a composite model in estimating earnings manipulation that considers various aspects of an entity, such as sales receivables, gross margin, asset quality, sales growth, depreciation, discretionary expenses, leverage, and accruals. Here, the Mean M-score of Shariah firms

is (-2.47), which is less than the prescribed standard (-2.22), as suggested by Beneish (1999). It implies that Shariah firms belong to the non-manipulator category compared to the mean M-score of non-Shariah companies (-2.09). Thus, it is evident from the M-score that there is some sort of manipulation among non-Shariah firms, as their M-score is higher than the standard value. As far as the Z-scores are concerned, Shariah firms have having Z-score (2.85), which is above the ideal value (2.67), which makes them 'safer' in terms of their financial conditions. However, the non-Shariah firms belong to the 'grey category as their Z-score lies between 1.81 to 2.67. So, while analyzing both the M-score and Z-score, Shariah firms are relatively more transparent and stable than the non-Shariah firms in the study.

Table 5. Summary of composite measures

	Non-Shariah complaint firms	Shariah-compliant firms
Mean M-Score	-2.09	-2.47
Mean Z-Score	2.53	2.85

Table 6 shows the mean values of Shariah and non-Shariah firms compared using two-sample t-tests assuming equal variance. The mean difference test results indicate that Shariah non-compliant firms have positive AEM, which means they follow an income-increasing approach to managing their accruals. At the same time, there is negative AEM among Shariah-compliant firms as they are relatively more conservative in managing their accruals through an income-decreasing approach. Also, the magnitude of REM and TEM are less among firms complying with Shariah principles. So, the difference is significant among both groups in managing their earnings. Likewise, indicators such as Day sales receivables, Depreciation, Leverage, and Total accruals are also significantly different among the Shariah and non-Shariah firms. However, we have not found any significant difference in Gross margin, Asset quality, and Sales growth among the sample groups of the study. It is also evident that compared to non-Shariah firms, Shariah-compliant firms exhibit lower levels of DEPI and TATA, indicating that managerial discretions are comparatively low among Shariah firms.

Table 6. Mean difference test (two sample t-test)

Indicators	Non- Shariah	Shariah		
	Mean	Mean	Mean difference	p-value
AEM	0.655	-0.203	0.858***	.007
REM	1.126	.722	0.404**	.047
TEM	1.074	0.781	0.293*	.100
DSRI	1.141	0.752	0.389***	.000
GMI	1.382	.788	0.594	.714
AQI	1.133	0.735	0.398	.369
LEVI	1.162	0.917	0.245***	.009
SGI	0.981	0.510	0.471	.652
DEPI	0.973	0.864	0.109**	.021
SGAI	1.032	0.892	0.140**	.049
TATA	1.729	1.104	0.625**	.038

***, **, * indicates level of significance at 1%, 5% and 10% respectively.

6. Multivariate analysis

Multiple regression analysis is done separately on the study's Shariah-compliant firms, Shariah-non-compliant firms, and pooled sample firms to get more refined results. The Study uses panel data, and The Hausman (1978) test selects the appropriate regression model. The p-value for the Chi-square (0.0107) under the Hausman test is significant at

the 5% level, which means that FEM (Fixed effects Model) is appropriate. The p-value of the Breusch-Pagan test stood at (0.0791). So, we failed to reject the H0 at a 5% level, meaning there is no heteroskedasticity issue in the model. Chow test was also conducted, and the F statistics from the Chow test was 5.22 with a p-value of (0.002), which suggests that the relationship between earnings management and independent variables in the study differs between the Shariah and non-Shariah complaint firms. The p-value of the Ramsey Regression Equation Specification Error Test (RESET) stood at (0.11), and we failed to reject the H0, implying no misspecification in the model. It is accessible from the issue of non-linearity.

6.1. Multiple regression analysis (Shariah-compliant firms).

Regression results of dependent, independent, and control variables are presented in Table 7.

Table 7. Multiple regression analysis (Shariah-complaint firms)

Variables	Dependent Variable AEM	Dependent Variable REM	Dependent Variable TEM
DSRI	0.013	0.041	0.174***
	(0.89)	(1.55)	(6.09)
GMI	-0.029***	0.025	0.013
	(-5.88)	(0.43)	(3.16)
AQI	0.067**	0.227	-0.036
	(2.46)	(0.96)	(-0.92)
SGI	0.010	-0.054	0.044***
	(1.53)	(-0.72)	(3.28)
DEPI	0.104***	0.293	0.013
	(3.15)	(.611)	(1.63)
SGAI	-0.032	-0.019*	0.023
	(-1.14)	(-1.78)	(0.011)
LEVI	0.048***	-0.064***	0.066***
	(5.37)	(-3.68)	(5.98)
TATA	0.042	-0.071	0.031**
	(1.65)	(-1.33)	(2.22)
Z score	-0.261*	-0.011***	-0.035***
	(-1.85)	(6.47)	(-3.68)
Firm size	0.114	0.053**	0.181
	(0.62)	(2.41)	(1.61)
Firm age	-0.014	-0.014	-0.047
	(-1.16)	(-1.27)	(-1.31)
CR	0.011	0.022*	-0.016
	(0.53)	(1.95)	(-0.27)
Intercept	0.042	0.064	0.081
	(2.37)	(4.24)	(4.78)
R²	0.409	0.412	0.517
N (Firm years)	8820	8820	8820
VIF	1.38	1.41	1.29

Regression coefficients are reported along with the T-Statistics in the parenthesis at 1%, 5%, and 10% significance levels (*, **, and ***, respectively).

As far as Shariah firms are concerned, DSRI is positive and significant towards TEM. This is consistent with Ramírez-Orellana et al. (2017), who found the presence of day sales receivables in managing their earnings.   At the same time, the coefficient of GMI is found

to be negatively associated with AEM. It is also consistent with the outcome of Sabrun et al. (2017), who posit that accrual management is lower among Shariah-compliant firms as they go through Shariah screening. Regarding the AQI of Shariah firms, it seems to be positive and significant towards AEM, which means that the increase in intangibles and deferred costs result from the management of accruals.

The coefficient of SGI is also positive and it is significant towards TEM. This suggests that managers use discretion in inflating their sales growth to exploit opportunities in the market (Harahap, 2021). Analysis of the DEPI coefficient also shows a significant and positive association with AEM. Since depreciation is a non-cash expense, the insiders use discretions in the depreciation provisions to enhance their reported figures (Keating & Zimmerman, 1999). However, the negative coefficient of SGAI towards REM indicates manipulation in the actual transactions by reducing the discretionary expenses. Lin et al. (2006) also found that negative SGA expenses can increase the possibility of meeting the earnings forecasted by the analysts. While considering the LEVI, it is positive and significant towards all the parameters of EM. It is associated with the findings of (Jelinek, 2007 and Nalarreason et al., 2019) that EM is positively associated with various leverage levels of an entity. TATA's vivacious and significant coefficient towards TEM also indicates income-increasing managerial discretions. It also adds to the findings made by (Goel, 2012) that firms are using income income-increasing approach to meet industry parameters. At the same time, the coefficient of the Z score seems to be hostile towards AEM, REM, and TEM. It is in line with (Valaskova and Androniceanu, 2021) that financially healthy firms (green zone) have lower levels of earnings management. The positive association of firm size with REM indicates that larger firms with higher cash flow coverage (CFC) can manage their actual transactions (Elkalla, 2017).

6.2 Multiple regression analysis (Shariah-non-compliant firms)

Results of multiple regression analysis of non-Shariah compliant firms are shown in Table no.8. Both F-statistics and R square values of all three regressions are statistically effective in explaining the association towards earnings manipulation indicators, Z-score, and control variables. Regression outputs of AEM, REM, and TEM are shown separately for an in-depth analysis of EM toward reporting transparency and financial stability. Here, DSRI is positive and significant towards both AEM and TEM. This is consistent with (Ahearne et al., 2016), who found that sales-based incentives induce insiders to manage their earnings using credit sales figures. Also, the GMI coefficient seems positive and significant towards AEM. It is in line with (Koh, 2007), who found that firms manage their earnings to meet their benchmark profits to utilize the opportunities in the capital markets. At the same time, AQI is also positive and Significant towards AEM. It supports the findings of (Nwogugu, 2015) that there is an increase in intangibles in the entity due to managerial discretions.

The coefficient of SGI is also found to be positive towards AEM. It confirms the results of Zhang et al. (2020), who posit that firms manage their accruals to boost their sales. However, while analyzing the depreciation aspect, DEPI is positive and significant towards REM and TEM. It supports the depreciation suspension policy adopted by Italian firms to manage their reported figures (Mattei et al., 2023). Likewise, the coefficient of SGAI is also found to be positive and significant towards REM and TEM. It is in line with the conclusions made by (Sitanggang et al., 2019) that firms use discretionary expenses as an effective tool to manage their earnings. However, the regression coefficient of LEVI is negatively significant towards all the measures of EM, such as AEM, REM, and TEM. It can be inferred that leveraged firms are subjected to the scrutiny of lenders that mitigate the scope for discretionary practices by the insiders (Kalbuana et al., 2021). However, the coefficient of TATA is positive and significant for both AEM and TEM. It is in line with Zang (2012) that the reported figures in total assets are managed using accounting accruals. The coefficient of the Z-score is negative and significant towards all the measures of earnings management. It justifies the findings of (Lin et al., 2016) that firms in the grey

zone have a higher propensity to bankruptcy as they manage their earnings aggressively. Nevertheless, the coefficient of firm size is negative and significant towards TEM.   Large-cap firms tend to manage their earnings less due to their compliance with various parameters such as the composition of the board of directors, audit quality, and third-party certifications (Badolato et al., 2014). At the same time, the coefficient of firm age is negative and significant towards both AEM and TEM. The presence of managed earnings using accruals is less as it is easy to detect compared to REM and may affect their reputation in the market (Indracahya & Faisol, 2017).

Table 8. Multiple regression analysis (Shariah-non-compliant firms)

Variables	Dependent Variable AEM	Dependent Variable REM	Dependent Variable TEM
DSRI	0.021**	0.032	0.056**
	(2.12)	(1.14)	(2.02)
GMI	0.027***	0.024	0.054
	(5.40)	(0.82)	(1.59)
AQI	0.170***	0.014	0.026
	(3.55)	(0.43)	(1.25)
SGI	0.104***	0.256	0.071
	(3.28)	(0.48)	(1.33)
DEPI	0.010	0.077***	0.034***
	(1.51)	(2.86)	(3.21)
SGAI	0.013	0.040***	0.018***
	(0.97)	(2.82)	(4.95)
LEVI	-0.024*	-0.134***	-0.035***
	(-1.79)	(-6.62)	(-5.52)
TATA	0.116***	0.045	0.038***
	(3.52)	(1.18)	(3.80)
Z score	0.143**	0.026*	0.023***
	(2.32)	(1.66)	(4.71)
Firm size	0.017	0.018	-0.021***
	(0.93)	(0.86)	(-4.08)
Firm age	-0.031***	-0.014	-0.073**
	(-3.12)	(-1.27)	(-2.06)
CR	0.017	0.034	0.015
	(0.93)	(0.90)	(1.40)
Intercept	0.055	0.086	0.097
	(1.10)	(2.03)	(1.89)
R^2	0.422	0.419	0.475
N (firm years)	9360	9360	9360
VIF	1.18	1.21	1.36
F-statistic	16.31	12.74	18.64

Regression coefficients are reported along with the *t*-statistics in the parenthesis at 1%, 5%, and 10% significance levels (*, **, and ***, respectively).

6.3. Multiple regression analysis (full sample)

Table 9 illustrates multiple regression analysis of pooled sample firms. To analyze the interaction effects, we regress the variables using a dummy variable (Firms that comply with Shariah principles are given one and non-Shariah firms as 0) in the multiple regression models, where AEM, REM, and TEM are dependent variables.

Table 9. Multiple regression analysis (full sample)

Variables	Dependent Variable AEM	Dependent Variable REM	Dependent Variable TEM
DSRI	0.6225***	0.0384	0.2014
	(3.1153)	(0.9119)	(0.4465)
DSRI * Shariah	0.0352	0.2141	0.6853*
	(0.8867)	(1.6291)	(1.8616)
GMI	0.0034	0.084	0.4012**
	(0.2896)	(1.001)	(2.2718)
GMI * Shariah	-0.8664*	0.0005	0.1578
	(-1.8732)	(0.9334)	(0.7404)
AQI	0.0378*	0.0135	0.0065
	(1.9891)	(0.5734)	(1.4563)
AQI * Shariah	0.1667**	0.0031	1.3978
	(2.1578)	(0.0554)	(1.5968)
SGI	0.1920*	0.0213	0.8759**
	(1.8957)	(0.6210)	(2.2141)
SGI * Shariah	0.6903	0.0518***	0.0423*
	(0.7933)	(3.2583)	(1.8562)
DEPI	0.094*	0.0451***	0.1537
	(1.704)	(3.472)	(0.3473)
DEPI * Shariah	-0.0381	0.0200	0.0016
	(-1.4946)	(0.8691)	(0.7632)
SGAI	0.004*	0.109**	0.0751
	(2.929)	(1.969)	(0.253)
SGAI * Shariah	-0.0361	-0.9018*	0.0383
	(-0.6732)	(-1.6942)	(0.6648)
LEVI	-1.1562*	-0.0235*	-0.4813***
	(-1.997)	(-1.905)	(-2.799)
LEVI * Shariah	-0.0344**	-0.0161**	-0.3116***
	(-2.6781)	(-2.4672)	-2.1811
TATA	1.098***	0.9379	1.1793***
	(6.321)	(1.417)	(1.726)
TATA * Shariah	0.0011	0.0726	1.337***
	(0.7962)	(1.4476)	(2.7565)
Z score	0.1980**	0.2029**	0.5603***
	(2.163)	(2.338)	(3.179)
Z score * Shariah	-0.0378*	-0.0518***	-0.0412**
	(-1.9781)	(-3.2573)	(-2.4717)
Firm size	-0.3145	-0.0309	-0.5998**
	(-1.524)	(-1.5648)	(-2.397)
Firm size * Shariah	-0.7005**	0.0047	-0.0034
	(-2.527)	(0.7758)	(-0.2899)
Firm age	-1.007**	-0.0001	-0.0475
	(-2.476)	-(0.0072)	(-0.835)
Firm age * Shariah	0.0053	0.0079	-1.610***
	(0.4041)	(0.6781)	(-2.981)
CR	0.0072	0.0025	0.2492
	(1.552)	(1.004)	(1.093)
CR * Shariah	0.0456	-0.0187	0.0236
	(0.8689)	(-0.3732)	(0.4903)
Intercept	0.491	0.563	0.609
Adjusted R2	0.17	0.22	0.25
N	18180	18180	18180

Regression coefficients are reported along with the t-statistics in the parenthesis at 1%, 5%, and 10% significance levels (*, **, and***, respectively).

It is evident from the pooled sample regression that the coefficients of AQI and TATA are positively associated with the Accrual earnings management among Shariah-compliant firms. As far as the asset quality aspects are concerned, Alves (2013) documented that the managers utilize discretions in asset impairment for managing their earnings using the provisions in the valuation of assets. In contrast, the GMI, LEVI, Z-score, and FIRM SIZE coefficients are negatively associated with the AEM practices among the Shariah-complaint firms. (Ardison et al., 2013) posited that increased debt reduces managerial discretionary spending. While the bankruptcy elements are concerned (Li et al., 2011) found evidence for opportunistic earnings management among bankrupt firms. At the same time, (Kim et al., 2003) documented that large firms are less tend to manage their earnings using discretionary accruals. Compared to the accrual aspects, detecting earnings management using real-based transactions is relatively tricky (Commerford et al., 2016). Here, the coefficients SGI are positively associated with the real-based earnings management aspects of Shariah-compliant firms, which indicates that managers use genuine transactions to inflate the reported sales figures. Collins et al. (2016) also found that companies deflate their cost of production to exhibit a sales growth scenario among the public. In comparison, the SGAI, LEVI, and Z-score coefficients depict a negative association with REM practices. Zamri et al. (2013) also revealed evidence of lower levels of REM among highly leveraged firms. Also, the negative coefficient of the Z-score indicates that aggressive management of the actual transactions affects the entity's future cash flows, and it can lead to the risk of bankruptcy (Dutzi & Rausch, 2016). Total earnings management aggregates both AEM and REM practices where the DSRI, SGI, and TATA coefficients are positively associated with the TEM aspects of Shariah-compliant firms. Kwon and Lee (2019) documented that unbilled sales receivables are active in managerial discretionary practices. Similarly, (Song et al., 2013) also posited that the misappropriation of assets has a significant and positive association with managerial discretion. The LEVI, Z-score, and FIRM AGE coefficients were significantly negative toward the total earnings management among the Shariah-complaint firms. Because both leverage and Shairah compliance invite external scrutiny that mitigates the scope for managerial discretion (Alkdai & Hanefah, 2012). Das et al. (2018) also found a negative association between firm age and earnings management, which indicates that reputed firms are less tend to manage their earnings less.

7. Discussion

The present study examines the extent of financial stability and reporting transparency among India's Shariah-compliant and Shariah-non-compliantfirms. From an investors' point of view, compliance with Shariah principles reduces earnings management practices. However, in the liberal market scenario, it is argued that the inclusion of a religious index in the capital market is used as a tool for attracting investments, and as compared to suitable corporate governance mechanisms, Shariah compliance is not very effective in mitigating EM practices (Alsaadi, 2021). However, compliance with Shariah principles insists on lower leverage, lower cash holding, and lower receivables that reduce the scope for managerial discretion (Irawati et al.,2019). The present study also reveals that the magnitude of AEM, REM, and TEM of Shariah-compliant firms is less than that of non-Shariah firms. Rahman et al. (2021) also found evidence for lower earnings management for Shariah firms over non-Shariah firms. The present study also exhibits income income-decreasing behavior of Shariah firms as the proxy for AEM. DA is found to be negative, implying that they are relatively conservative in managing their earnings. Ismail et al. (2015) also found that the Shariah firms have higher accrual quality and reporting transparency levels due to their Shariah status. Shariah and Shariah-non-compliantfirms' financial stability and reporting transparency are analyzed using the Altman Z-score and Beneish M-score, respectively. It is evident from the mean Z-score of Shariah-compliant firms that they belong to the 'safe' or 'green' category, which implies that they are less prone to the risk of bankruptcy due to financial

solid fundamentals. Alsaadi and Jaafar (2017) also documented the evidence for higher earnings quality among Shariah-complaint firms. The mean M-score of Shariah-complaint firms in the study also reveals that the firms that go for Shariah screening are relatively more transparent and belong to the category of 'non-manipulators' based on their manipulation score. Kolsi and Grassa (2017) also documented that the reported figures of Shariah-compliant firms are relatively fair and transparent due to the scrutiny of Shariah screening regulators.

8. Conclusion

We examine the impact of earnings management on financial stability and reporting transparency of Shariah-compliant and non-compliant firms in India from 2008 to 2023. We employ the Kothari and Roychodhury models to estimate proxies for earnings management and capture the earnings manipulation and bankruptcy risks with the Beneish M and Altman Z scores, respectively. Shariah-compliant firms are less prone to earnings manipulation and bankruptcy than Shariah-non-compliantfirms and are more transparent in their earnings reporting. Beyond its religious significance, Shariah screening effectively promotes ethical business practices that enhance investor protection. These findings can help managers formulate policies and assist potential investors in making informed investment decisions based on Shariah principles. So, the study's findings confirm (Alam et al., 2020) that maintaining the Shariah status and due to the Shariah screening of regulators mitigate managerial discretions and thereby reduce the information asymmetry. Our study contributes to the existing literature by highlighting the relevance of Shariah compliance in enhancing reporting transparency by reducing the manipulation of earnings. This is the first study in India that addresses the managerial discretionary practices among the Shariah firms since the compilation of the Shariah Index in 2008. So, the study findings will help policymakers formulate more legislation and regulations for addressing managerial discretionary practices. Also, the study can aid the decision of potential investors considering Shariah indexation as a sign of ethics and moral conduct. However, the present study is confined to a limited number of listed companies in India, and the inclusion of more companies can affect the study results. Research on discretionary practices among Shariah-complaint firms can be extended to various dimensions such as corporate governance aspects, CEO duality, non-audit fees, and board composition that can give more comprehensive results. Also, future studies can be extended by comparing the capital structure and the cost of capital aspects of the entities with ESG compliance and Shariah compliance to analyze the relevance of the Shariah concept in the modern scenario. The post-IPO performance of the Shariah and Shariah-non-compliantfirms can also be analyzed in the long run to analyze the impact of discretionary accruals on the wealth of investors, which may help them to make investment decisions.

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