

## Does Better Accrual-Quality Ensures Higher Shareholders' Wealth?

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### ABSTRACT

Financial Shenanigans are intelligent ways of manoeuvring the reported earnings at the discretion of the manager without violating the legal framework. The same is known as earnings management also, and academia has a plethora of studies related to this. The impulse of higher reported income leads to an abnormal return in the secondary market, which impacts the value of the ESOP that the managers hold (Bergstresser and Philippon (2006).

The invaluable work of Jones (1991) remains the torchbearer for building a suitable model to detect earnings management. Though Jones' Model focuses on the absolute value of accruals generated at the discretion of the manager, Beneish (1999) and Dechow and Dichev (2002) have emphasized measuring the quality of accruals.

In our paper, we have enquired whether a better score of accrual quality (measured through Beinish's M Score) ensures higher shareholders' wealth (EPS). We have worked with 37 listed firms of Nifty50 (excluding banks and financial institutions- as the model suggests). We have computed the M score for the last three financial years. We have applied the OLS regression method. We have observed a confounding result with respect to our null hypothesis. We have concluded that better accrual quality may not lead to a higher EPS. This may be due to the fact that the quality accruals do not inflate the reserves and subsequently may not trigger a dividend-signalling. This itself may be considered as a further scope of study. Our volume of data and

the bivariate analysis may remain as the limitations though the results are unique in the Indian context.

Keywords: Earnings management, accrual quality, Beinish's M Score, ESOP, Financial Shenanigans.

## 1. INTRODUCTION

The effective allocation of savings to investment opportunities represents a significant challenge for any economy. Financial transactions between savers and entrepreneurs are often inhibited by two main obstacles: information asymmetry and agency problems. The former arises when managers and entrepreneurs possess superior knowledge regarding business investment opportunities, which creates an 'information problem' for savers. This discrepancy in information can hinder investors' abilities to identify high-potential businesses, complicating their investment decision-making process. The latter issue pertains to the agency problem, where managers or entrepreneurs may misrepresent the profitability of investment opportunities once capital is acquired. This manipulation can lead to the misappropriation of investor funds. The existence of both information asymmetry and agency problems underscores the necessity for robust reporting and disclosure practices. Transparent financial statements empower investors and external stakeholders to assess a company's growth over time and perform various analytical evaluations, such as assessing earnings quality, thereby facilitating more informed investment decisions.

The concept of earnings quality was first introduced by Benjamin Graham and David Dodd in their influential book, "Security Analysis," published in 1934. They described earnings per share as a 'coefficient of quality' to clarify the equity valuation model commonly used on Wall Street. In 1968, Ray Ball and Philip Brown conducted research that demonstrated a significant correlation between stock prices and accounting information. Before these foundational studies, the academic discussion surrounding earnings quality primarily viewed it as a theoretical idea rather than a measurable classification (Dechow et al., 2010). At present time, earnings quality is defined as the extent to which a firm's reported earnings accurately predict its future earnings (Gissel, 2005). Further research has shown that a company's success is fundamentally linked to its ability to generate cash flows that exceed its expenditures (Easton et al., 1992; Dechow, 1994). However, in addition to cash flow considerations, several other factors also affect earnings quality. For example, a study by Madhumathi and Ranganatham

(2021) found that proactive monitoring by auditors improves earnings quality management. Conversely, a higher proportion of shares held by managers has been associated with increased manipulation of earnings reporting. Effective oversight by key managerial personnel and audit committees can help reduce such manipulation, a practice more commonly observed in developed countries (Xie, 2003; Gaio & Raposo, 2014). The evolving understanding of earnings quality has had a significant impact on contemporary financial analysis and reporting standards.

### 1.1 Measuring Earnings Quality

Numerous studies have established that earnings quality can be categorized into two primary groups: (1) Decision Usefulness and (2) Accountability. On one hand, earnings quality is assessed based on its persistence and value relevance, which are crucial for informed decision-making. On the other hand, when considering earnings quality in terms of accountability, it is evaluated through conservatism and accrual quality. Among these concepts, persistence is the most prevalent, as it provides insights into the potential future growth of current earnings (An, 2017). It is measured as:

$$\frac{Earnings_{i,t}}{Total\ Assets_{i,t-1}} = \alpha + \beta_1 \frac{Earnings_{i,t-1}}{Total\ Assets_{i,t-1}} + \varepsilon_{i,t} \quad (1)$$

Within this formula, the investors consider the value of  $\beta_1$  as the most significant as a value closer to one indicates persistent earnings, while the value of  $\beta_1$  close to zero indicates a volatile one.

Moreover, in the realm of financial accounting, it is essential to give careful thought to the values recorded, mainly when compiling accounts for the balance sheet. While commonly used across many organizations, the accrual accounting method has come under scrutiny for potentially inflating the balance sheet figures. This concern arises from the way accrued revenues and expenses are recognized, which can sometimes create a misleading picture of a company's true financial situation. To gain a more nuanced and accurate understanding of a company's earnings quality, the Beneish M-Score model has emerged as a valuable tool, praised for its long-standing reliability. This analytical model integrates actual cash flow values

generated by the business, providing a more transparent and truthful representation of its operational performance (Beneish, 1999). In our research, we have leveraged the Beneish M-Score model to evaluate the degree of financial manipulation that may be occurring, whether orchestrated by company management or the board. By doing so, we aim to uncover any discrepancies in financial disclosures and better understand the integrity of the reported financial health of the business.

### 1.2 Research Gap and Objective

Numerous researchers have undertaken extensive studies to analyze the relationship between stock performance across various global markets and earnings quality (Li, 2014; Saleh et al., 2020). In the context of the Indian market, while Lyimo (2014) explored different measures of earnings quality within the Indian stock market, there remains a notable gap in research regarding the correlation between stock returns on the National Stock Exchange (NSE) and earnings quality. Consequently, our study seeks to fill this gap by examining this relationship to better understand the impact of earnings quality on strategies aimed at maximizing shareholder wealth.

### 1.3 Hypothesis

$H_0$  = Earnings quality does not affect the EPS of a firm.

$H_1$  = Earnings quality affects the EPS of a firm.

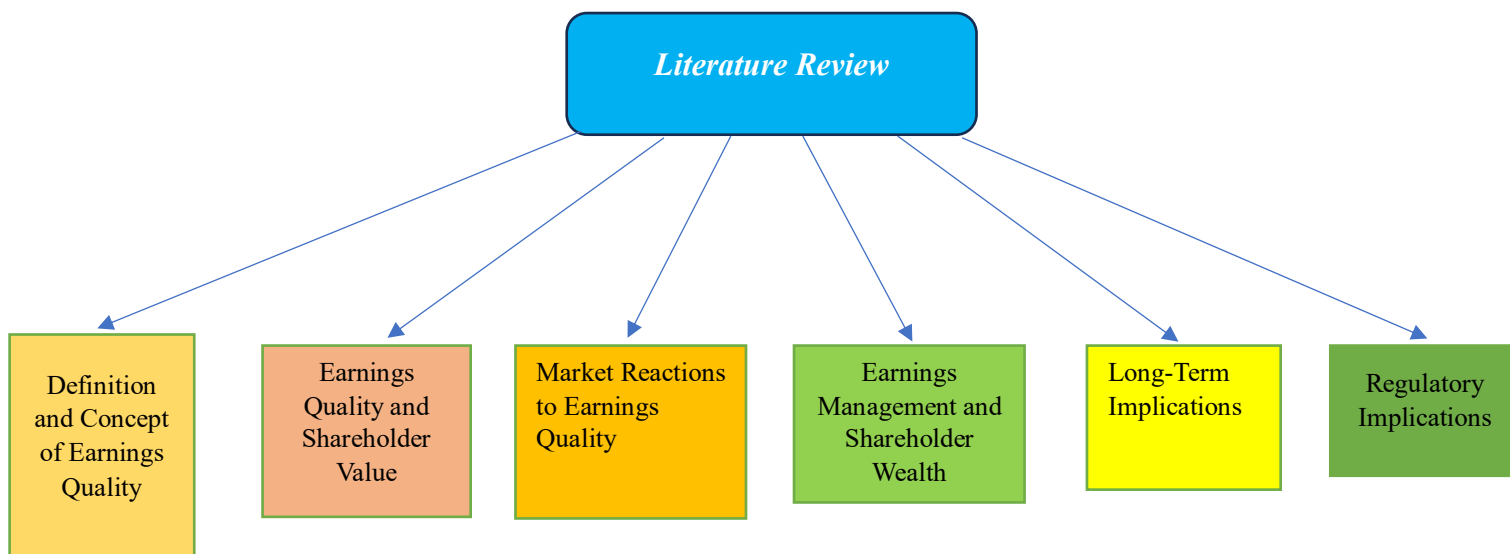
## 2. LITERATURE REVIEW

Earnings quality is the measurement of how company's earnings are reliable to assess a company's current and future performance. It is also known as quality of earning in accounting, refer to ability of reported earnings (net profit) to predict future earnings. Net profit may not be accurate indicator of financial success of a firm. For example, if a company report large net profit but shows negative cash flows it may not be appeared as a financially sound organisation. Profit is calculated on accrual basis of accounting but cash flow actually depicts the actual financial position or liquidity position of the organisation. Earnings quality refers to the degree to which reported earnings reflect the true financial performance of a company. Schipper (1989) defined earnings quality as capacity of reported earnings to forecast the earnings to be earned in the future. This definition mentioned the predictive power of reported earnings on future economic performance

which is highly crucial and important to stakeholders. Higher earnings quality indicates that the reported earning is a dependable signal of the firm's economic position, while low earnings quality suggests that the reported earnings probably distorted or manipulated, leading to wrong portrayal of company's financial condition. This concept has garnered significant attention in accounting and finance literature due to its potential impact on shareholders' wealth. This literature review explores the relationship between earnings quality and shareholder value, synthesizing key findings from different previous studies.

In this study we have segregated entire literature review of into several broad areas to understand different dimensions of earnings quality which are mentions below in tabular format:

**Table 1: Classification of the Literature Review**



### 1. Definition and Concept of Earnings Quality

Earnings quality can be intricately examined through several key dimensions, such as the sustainability of earnings over time, the degree to which earnings may be manipulated, and the relevance of these earnings in relation to a firm's overall performance (Dechow & Dichev, 2002). High-quality earnings are generally distinguished by characteristics such as persistence—indicating that they are consistently generated over periods of time—predictability, which means they can be reliably forecasted, and verifiability, allowing external

parties to confirm them through independent assessment (Francis et al., 2004). In stark contrast, low-quality earnings may stem from aggressive accounting practices that obscure a company's true financial situation, thereby creating a misleading picture for investors.

Entwistle and Phillips (2003) highlight that earnings quality must resonate with the core objective of financial reporting: to provide users with information that is both relevant and reliable. In this context, Dechow (1994) underscores the critical role earnings play for a diverse range of stakeholders, offering them invaluable insights into a firm's operational performance and financial health. Furthermore, as Bushman and Smith (2003) observed, both investors and company managers significantly depend on earnings as a primary mechanism for identifying viable investment opportunities and assessing the potential success of those investments.

## 2. Earnings Quality and Shareholder Value

Numerous studies have delved into the relationship between earnings quality and shareholder wealth, revealing significant insights. One noteworthy study by Bhattacharya et al. (2003) demonstrated that companies exhibiting higher earnings quality are often rewarded with a lower cost of capital and increasing stock prices. This observation suggests that investors tend to favour companies that showcase transparency and reliability in their financial reporting. Moreover, Amernic and Robb (2003) highlighted that management plays a pivotal role as an internal factor influencing earnings quality. Their research emphasizes the importance of managerial practices and decisions in determining the integrity and reliability of financial reporting. In addition, Francis et al. (2005) identified a noteworthy positive correlation between the market value of shares and earnings quality. Their findings indicate that as earnings quality improves, investor confidence is likely to increase, which, in turn, can drive up stock prices. This underscores the critical role of high-quality earnings in attracting investment and enhancing overall market valuation for firms, thereby creating a virtuous cycle that benefits both the company and its shareholders.

## 3. Market Reactions to Earnings Quality

Earnings quality significantly impacts investor confidence and their subsequent reactions to market dynamics. High-quality earnings can enhance credibility and foster a more

favourable perception among investors, while low-quality earnings may lead to skepticism and volatility in market responses. Francis et al. (2005) argued that high-quality earnings not only enhance investors' confidence in a company's financial health but also encourage them to invest more capital in the company's stock. In the same vein, research by Li and Zhang (2010) demonstrated that companies with superior earnings quality often experience more favourable stock price movements in response to their financial reporting. Their findings suggest that investors are more likely to trust the earnings reports of firms known for their transparency and reliability. This increased level of trust is crucial as it not only improves market perceptions but also contributes to an increase in shareholder wealth, illustrating the essential role that high earnings quality plays in financial markets.

#### 4. Earnings Management and Shareholder Wealth

Manipulation of financial results to achieve specific goals carries profound implications for shareholders' wealth. Although most researchers mentioned that strategic earnings management can balance reported earnings with investor's expectations. Healy and Wahlen (1999) argued that while this practice may smooth earnings and project an image of stability, it can easily mislead investors. When the true financial position of a company is disclosed, it often triggers volatility in its stock price.

Manipulation of a firm's financial reports to portray a false picture of a company's profitability poses a significant threat to investors. In this contest, Beneish (1999) introduced the Beneish M-score Model, a statistical score designed to identify firms that are likely to engage in earnings manipulation or processing false financial reports. He showed in research that companies having lower M-scores are likely to have lower earnings quality and often suffer a decline in stock price. This emphasises the damaging impact of earnings manipulation on shareholders' wealth, and questions arise on the true financial health of those firms.

#### 5. Long-Term Implications

Quality of earnings has a long-term impact on firms and their stakeholders. Higher quality of earnings, distinguished by transparency and robustness, not only enhances the investor's trust but also contributes to the steady growth of the firm. Dechow et al. (2010) emphasise in their research that improved earnings quality is linked to strong long-term performance of the firm, ultimately benefiting shareholders. On the other side, firms engaging in short-term earnings management may experience fleeting boosts in share price but often face significant long-term repercussions, including loss of investor trust, decrease in market value

of the firm, decrease in share price, etc., which can raise questions on the firm's overall success and stability.

## 6. Regulatory Implications

The relationship between earnings quality and shareholder wealth has significant implications for regulators and standard-setting bodies. Efforts to enhance transparency in financial reporting, such as implementing International Financial Reporting Standards (IFRS), aim to improve earnings quality (Eilert & Sweeney, 2017). Improved regulatory frameworks may lead to enhanced shareholder value through increased earnings reliability.

Earning quality can be manipulated by internal management, and through a robust corporate governance mechanism, internal manipulation can be controlled, and true and fair positions of accounts can be published, which is highly recommended. It is also highly necessary for external stakeholders and investors to feel that their investments are in safe custody. Gaio and Raposo (2014) mentioned in their study that in a particular environment, inadequate accounting information might compel the firm to adopt an expensive corporate government mechanism. Conversely, firms that maintain higher earning quality may require less investment in costly corporate governance mechanisms.

There is a growing interest in Environmental, Social and Governance (ESG) factors to assess how this factor influences earnings quality and financial performance. Research could establish the relationship between corporate sustainability, ESG disclosure and earnings quality (Ioannou & Serafeim, 2017). Barth (2018) highlighted another direction of future research related to technological advancement and the use of big data analysis in business operations. Research could investigate how these technological tools affect financial reporting's accuracy and transparency, influencing earnings quality. Gupta and Bhardwaj (2019) mentioned another promising area of further research related to behavioural biases and their impact on earnings quality. Behavioural finance principles can throw light on how cognitive biases influence managerial decisions and manipulate financial reporting.

The literature consistently supports the notion that earnings quality significantly affects shareholder wealth. Higher earnings quality is associated with increased market valuation and



positive investor reactions, while low-quality earnings may lead to adverse market outcomes and reduced shareholder trust. As such, both practitioners and regulators must prioritize earnings quality to safeguard and enhance shareholder wealth.

### 3. Sample, Data & Methodology

#### 3.1 Sample & Data

In our study, we focused on 37 Indian companies listed in the Nifty50 index, which is a leading broad-based index. We excluded banking and financial institutions because many of the models we use to assess earnings quality and earnings management are not applicable to these sectors due to differences in their financial reporting structures. Our sample is non-probabilistic. We initially considered data from the previous three years, resulting in a total of 111 firm-years for our analysis. Our key variables include Beneish's M Score for each company and their earnings per share (EPS). We collected the data using the Prowess Database and performed our analysis using SPSS. Initial descriptive statistics of the sample are presented in Table 1.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Beneish M-Score	110	-9223.372036854777000	1812.58	-157.07	1454.07
EPS (Diluted)	110	-36.3	1492.7	194.693	202.9444
ABSM	110	.27	9223.37	220.05	1445.81
LOGABSM	110	-.55	4.14	.82	.71
LOGEPS	110	.00	3.17	2.12	.44
Valid N (listwise)	110				

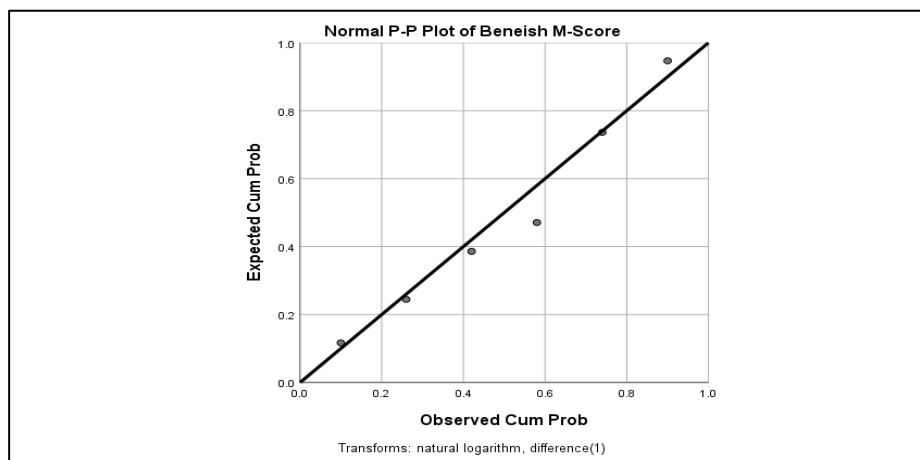
Source: Output of SPSS.

The initial evaluation of the data's normality was performed using PP Plots, which revealed that the distribution deviated from normality. To address this, we implemented two key transformations aimed at rendering the data normally distributed. Firstly, we converted the original M scores into their absolute values. This step was taken because our analysis was

primarily concerned with the magnitude of the scores rather than their direction. By focusing on absolute M scores, we eliminated any negative values that could skew the distribution. Secondly, we applied a natural logarithmic transformation to both the absolute M scores and the Earnings Per Share (EPS) values. The logarithmic transformation is a common technique used in statistical analysis to stabilize variance and normalize skewed data distributions. The transformed variables are designated as LOGABSM for the logarithmic transformation of the absolute M scores, and LOGEPS for the logarithmic transformation of the EPS.

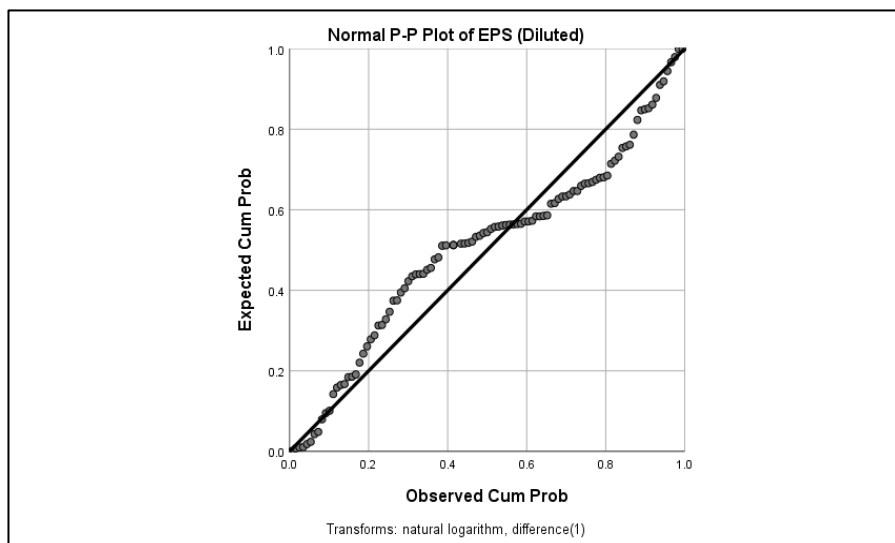
Following these transformations, we re-examined the PP Plots for LOGABSM and LOGEPS to assess their distribution properties. The results showed a significant improvement, with both transformed variables aligning closely with a normal distribution. This outcome indicates the effectiveness of the chosen transformations in achieving normality. For a visual representation of the results, please refer to Figure 1 and Figure 2, which illustrate the PP Plots for LOGABSM and LOGEPS, respectively. These figures confirm the successful normalization of the data after the applied transformations.

Figure 1. PP Plot of LOGABSM. (log of absolute M Score)



Source: Output of SPSS

Figure 2. PP Plot of LOGEPS. (log of Earnings Per Share)



Source: Output of SPSS.

Upon examining the PP Plots, it is evident that both variables display a nearly normal distribution, which positions us to apply parametric tests to this dataset, such as regression analysis. In an initial run of linear regression, we found a minimal relationship between the variables, suggesting one of two potential explanations: either the presence of outliers within the dataset or a fundamental lack of association between the variables themselves. To investigate this further, we turned to the Boxplot analysis using SPSS, which serves as a visual tool to identify outliers. The results, depicted in Figures 3 and 4, clearly indicate that there are 15 values across both variables that are classified as outliers. This finding raises the need for additional scrutiny, as these outliers may significantly influence the results of our regression analysis and could skew our understanding of the relationship between the variables. Thus, it becomes essential to address these outliers before drawing any definitive conclusions from our data.

Figure 3. Boxplot of LOGABSM

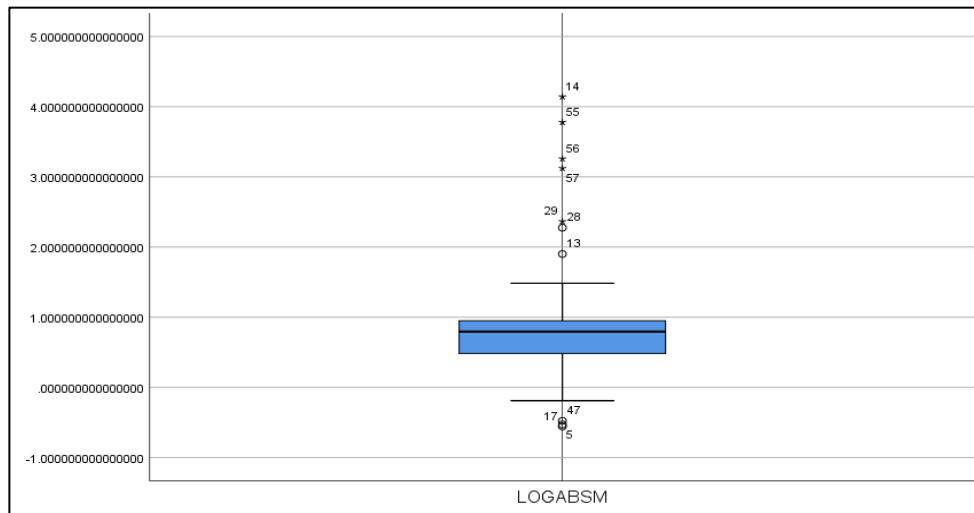
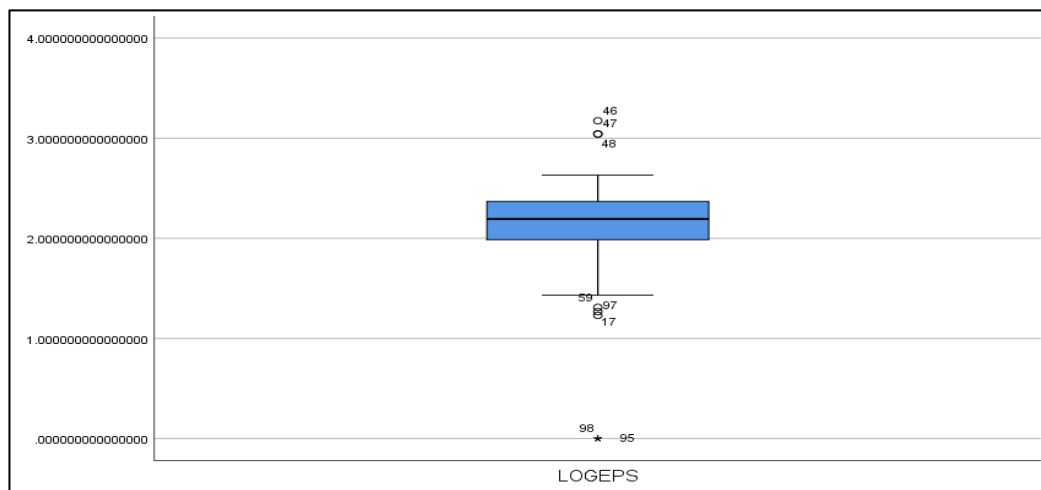


Figure 4. Boxplot of LOGEPS



Source: Output of SPSS.

Once we eliminated the outliers, we revealed a refined set of Modified Descriptive Statistics for the variables in question, as presented in Table 2.

Table 2. Modified Descriptive Statistics (Post Outlier Treatment)

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
LOGABS	9	-	4.141664619094	.8021001980563	.588985021284
M	6	.555358710116 147	100	54	548
LOGEPS	9	.000000000000	3.043480170022	2.108015791245	.436184538161
	6	000	550	409	897
Valid N (listwise)	9				
	6				

Source: Output of SPSS.

### 3.2 Methodology

We have utilized a linear regression model with the Beneish M Score as the independent variable and Earnings Per Share (EPS) as the dependent variable. The formula for calculating the Beneish M Score is based on the Beneish M-Score Model introduced in 1999. This statistical model employs various financial ratios to detect earnings manipulation and potential fraud in financial reporting, while also providing an indirect assessment of earnings quality. According to this model, the M-Score is determined by eight distinct variables (financial ratios). The formula is as follows:

$$M = -4.84 + .92 * DSRI + .528 * GMI + .404 * AQI + .892 * SGI + .115 * DEPI - .172 * SGAI + 4.679 * TATA - 0.327 * LVGI$$

In this context, the variables are defined as follows:

DSRI = Days sales in receivable index (Net Receivables / Sales)

GMI = Gross Margin Index (Gross Profit/ Sales)

AQI = Assets Quality Index (Non-Current Assets / Total Assets)

SGI = Sales Growth Index (Salest / Salest-1)

DEPI = Depreciation Index (Depreciation Expenses / Total Assetst-1)

SGAI = Sales, General & Administrative Expenses Index (SGA Expenses/ Total Assets)

TATA = Total Accruals to Total Assets  $[(\Delta \text{Net Operating Assets} - \Delta \text{Cash}) / \text{Total Assets}]$

$$LVGI = \text{Leverage Index } [(Debt\ t / \text{Total Assets } t) / (Debt\ t-1 / \text{Total Assets } t-1)]$$

The threshold value for determining the likelihood of financial manipulation in a company's earnings is set at -1.78, based on the model whose coefficients are outlined in the preceding analysis. This threshold has been established through research conducted by Beneish (1999), as well as subsequent studies by Beneish, Lee, and Nichols (2013), and Beneish and Vorst (2020). According to this model, if a company's M-score falls below -1.78, it is generally considered unlikely that the company engages in earnings manipulation. Conversely, if the M-score exceeds -1.78, the company is more likely to be involved in manipulative practices regarding its financial reporting.

In the next step, an examination of the relationship between the M-score and earnings per share (EPS) will be conducted through regression analysis. The results of this regression are captured in Table No. 3, where the adjusted R-squared value is presented. This value, which quantifies the proportion of variance in EPS that the M-score can explain, is alarmingly low and indicates a lack of statistical significance.

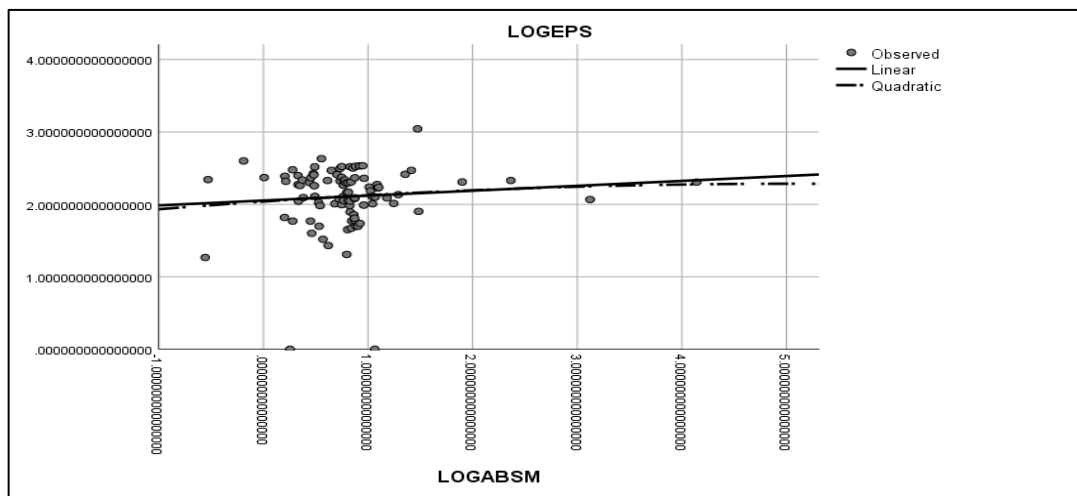
Table 3. Regression Summary

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.091 <sup>a</sup>	.008	-.002	.436664178866044
a. Predictors: (Constant), LOGABSM				

Source: Output of SPSS.

We have approached our analysis with a degree of caution, recognizing that a linear model may not adequately capture the complexities involved in investigating the relationship between earnings quality and earnings per share (EPS). To address this concern, we undertook a non-linear curve-fitting analysis. Despite our expectations, the results revealed that the non-linear model also failed to demonstrate a significant relationship between earnings quality and EPS. To provide a clearer perspective on our findings, we compared the predicted values generated by the non-linear model with the observed values. This comparison was then illustrated in Figure 5, which highlights the performance of both the non-linear and linear models side by side. The visual representation underscores our findings, showcasing that neither of the models succeeded in establishing a reliable connection between the variables under scrutiny.

Figure 5. Linear, Non-linear Observed- Predicted Plot



Source: Output of SPSS.

Establishing a clear and definitive relationship between Earnings Per Share (EPS) and Earnings Quality presents considerable challenges. This complexity stems from the multifaceted nature of both metrics, which are influenced by various factors, including accounting practices, financial reporting standards, and market conditions. While EPS is a widely recognized measure of a company's profitability, it does not necessarily reflect the true quality of a company's earnings. Earnings quality encompasses aspects such as sustainability, transparency, and the potential for future earnings growth. Consequently, drawing a direct correlation between these two elements necessitates a careful examination of the broader financial context and the specific characteristics of the company in question.

#### 4. Conclusion & Discussion

The analysis of the results presents several critical inquiries regarding the interplay between earnings quality and earnings per share (EPS). This observation is consistent with the findings of a recent study conducted by Clout and Willett (2016), which concluded that earnings themselves do not have a significant effect on stock returns. In the context of the Indian market, it is vital to understand that the quality of earnings might not be perceived as value-relevant information by investors. This situation could stem from the fact that the companies under investigation have exhibited a primarily stable and range-bound EPS over the past three financial years, as illustrated in Figure 5. The consistent and clustered nature of the EPS data reduces the likelihood of establishing a robust regression relationship with other firm-

specific variables. This limitation may help explain the insignificant correlation between earnings and EPS that Clout and Willett identified in their research. The ongoing clustering of EPS suggests that it is likely not significantly correlated with any particular characteristics or performance metrics of the firms analyzed. This opens the door for future research on the value relevance of various accounting metrics and information.

Interestingly, the steady pattern of EPS across the representative firms indicates that these companies also consistently report earnings that remain within a limited range. This additional observation may help elucidate why these firms are often categorized as blue-chip stocks within the secondary market, as their stability tends to attract a specific subset of investors looking for less volatile investment opportunities.

While our study is not without its limitations, such as a restricted volume of data and an emphasis on bivariate analysis, these aspects do not detract from the noteworthy findings we have uncovered. Such findings contribute to a deeper understanding of the current state of earnings quality and its implications in the Indian financial landscape.

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## Annexure

## 1. Descriptive Statistics of Beneish M Score Variables.

Summary Statistics, using the observations 1 - 111

<b>Variable</b>	<b>Mean</b>	<b>Median</b>	<b>Minimum</b>	<b>Maximum</b>
Sales	227.10	203.00	99.400	713.50
Depreciation	264.88	230.70	35.400	1071.5
TotalAssets	260.81	219.20	77.600	888.50
NoncurrentAssets	294.35	245.90	71.900	1210.0
GrossProfitLoss	-63.172	-21.700	-1182.0	731.30
NetOperatingAsset	12412.	672.30	-3271.1	6.4879e+005
cash	5229.9	58.700	0.00000	2.4714e+005
SGEXP	988.58	730.00	147.70	10610.
NetReceivable	-1605.7	115.10	-58984.	3880.0
<b>Variable</b>	<b>Std. Dev.</b>	<b>C.V.</b>	<b>Skewness</b>	<b>Ex. kurtosis</b>
Sales	97.220	0.42809	2.3906	8.2496
Depreciation	165.54	0.62495	2.9454	11.149
TotalAssets	136.84	0.52468	2.3508	6.1118
NoncurrentAssets	200.04	0.67962	2.8306	9.2791
GrossProfitLoss	292.35	4.6279	-1.3335	5.1880
NetOperatingAsset	68570.	5.5244	7.8500	66.759
cash	30682.	5.8666	6.5112	42.903
SGEXP	1098.1	1.1108	6.3976	51.814
NetReceivable	8716.0	5.4281	-5.6501	31.735
<b>Variable</b>	<b>5% Perc.</b>	<b>95% Perc.</b>	<b>IQ range</b>	<b>Missing obs.</b>
Sales	115.24	414.42	88.800	0
Depreciation	108.68	502.84	124.90	0
TotalAssets	146.86	571.62	111.80	0
NoncurrentAssets	127.04	713.84	144.20	0
GrossProfitLoss	-652.32	215.28	209.80	0
NetOperatingAsset	-2136.5	19331.	1089.8	0
cash	0.00000	4228.6	228.40	0
SGEXP	277.36	2087.0	628.20	0
NetReceivable	-5929.0	2171.3	889.30	0