

A Measure Of Deceitful Fiscal Transactions In Indian Steel Companies By Using Beneish M- Score

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Abstracts:

Profit or financial performance give stakeholders of a firm/company/organization information about its growth and positive output. Management decision making is fully demanded on the data provided by finance and accounting procedures. Financial results motivates employees as well as outsiders of a company, therefore management of profitability and disclosure is the most confrontational and important activity globally. The purpose of this paper is to find out financial data from a company's result, which has been manipulated and its degree of changes. Data is collected from the Steel sector in India. Analysis has been done on top 10 steel companies and for a period of 5 years (2017-22). The Beneish Model has been used to calculate the mal-practicing in accounting reports in these companies. This model is based on various financial ratios. The paper screens the development of the operation with earnings in the given sector (enterprises tend to manage earnings upwards), and analyzes the influences of macroeconomic factors on the phenomenon of earnings management. The detection of earnings management by M-score helps protect business partners of an enterprise against fraudulent behaviour, especially in the global environment.

Keywords: Financial Performance, financial results, Beneish Model, fraudulent behavior.

Introduction

The steel industry, which is a component of the core manufacturing sector, contributes significantly to the growth of the ¹economy as a whole, notably the infrastructure and building sector. After China, India is the second-largest producer of steel worldwide. Infrastructure, building, motor vehicles, consumer durables, and railroads are some of the primary demand generators for the steel industry. In 2018, India overtook the United States to become the second-largest consumer of steel in the world, after China. India is one of the main steel-consuming nations with the quickest rate of growth. Steel is a commodity that is traded on a worldwide scale because it is standardised and transportable products. Consequently, domestic steel product prices often follow trends in the global market. after applying appropriate tariffs and taxes ("Rating Methodology - Steel Sector," 2018). Every firm operates with the goal of increasing profits, which increases the company's wealth. In that regard, it is essential that the

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financial status of the organization be sound. A company's financial status may be assessed and comprehended through its financial statements, which include the fundamental information regarding both its financial performance and position. Such financial performance and position should occasionally be studied in order to know and also have control over the performance and situation. An evaluation of the business's viability, stability, and profitability is referred to as a financial analysis (GOPALAKRISHNAN et al., 2019). The revenue and expense While the balance sheet shows the worth of the company's acquired assets and liabilities at a specific moment in time, the a/c gives information regarding operating activities. The objective of gauging the financial health of an organization is not served by the absolute statistics disclosed in the financial statements (KUMAR, 2014)

Reforms in Steel Industry

After deregulation, the Indian steel sector has advanced to a new stage of growth, buoyed by the strengthening economy and increased steel demand. • India went from being the third-largest producer of crude steel in 2017 to the second-largest producer over the past four years (2018–2021). According to figures provided by the World Steel Association, the nation was also the largest producer of sponge iron or DRI in the world and the second largest user of completed steel in the world after China in 2021 (provisional). The National Steel Policy 2017 was published by the government in this capacity, and it has established the overall plan for promoting long-term growth for the Indian steel sector by 2030–2031, on both the supply and demand sides. Additionally, the government has revealed a plan for giving precedence in government purchases to iron and steel made in the country. A Production-linked Incentive (PLI) Scheme for Specialty Steel has also been authorized by the government. 42 million tonnes of specialty steel are anticipated to be produced by the end of 2026–2027. This would guarantee that the nation will make and use the specialty steel that would have otherwise been imported, valued at almost 2.5 lakh crores. Similar to this, specialty steel exports would increase to around 5.5 million tonnes from the existing 1.7 million tonnes, which generate FOREX of Rs 33,000 crore (An Overview of Steel Sector | Ministry of Steel | GoI, 2022)

M Score Model

Professor Messod Daniel Beneish, who developed the Beneish model, developed a number of analytical ratios and factors to detect financial fraud or a company's propensity for profits manipulation. The M-score, which demonstrates the level of profit manipulation, is produced using data from the organization's financial statements and a model. To find financial statement manipulations in well-known business scandals, several academics used the Beneish model (Bhavani & Amponsah, 2017)

The model has been calculated by using 8 variables by multiplying them with a constant number. These variable are financial ratios

Phase 1:

$$M = -4.84 + 0.92 * DRSI + 0.528 * GMI + 0.404 * AQI + 0.892 * SGI + 0.115 * DEPI - 0.172 * SGAI + 4.679 * TATA - 0.327 * LVGI$$

Phase 2:

$$M = -6.065 + 0.823 * DRSI + 0.906 * GMI + 0.593 * AQI + 0.717 * SGI + 0.107 * DEPI$$

Where:-

DRSI = Days' sale in receivables index. [The day sales in receivables of the current and prior year are compared with the objective of revealing inflated revenue (Beneish, 1999)

GMI = Gross margin index. [The ratio measures the gross margin or current and compares it with the prior year. An entity with poor growth prospects is more likely to manipulate (Beneish, 1999)

AGI = Asset quality index. [Non-current assets excluding property plant and equipment are compared with total assets with an AQI greater than 1 revealing the entity has either increased its intangibles or cost deferral hence creating earnings manipulation (Beneish, 1999)

SGI = Sales growth index. [The ratio measures current sales versus the prior year (Beneish, 1999)

DEPI=Depreciation index. [The ratio measures the depreciation rate of the current compared to prior year. Slower rates of depreciation may indicate an entity is revising useful life upwards or is adopting an income friendly method of depreciation (Beneish, 1999)

SGAI = Sales, General and Administrative Expenses Index. [The ratio compares current sales, general and administrative expenses with that of prior year (Beneish, 1999)

LVGI = Leverage Index. [Total debt is compared with total assets of current to prior year (Beneish, 1999)

TATA=Total Accruals to Total Assets. [The ratio measures the extent to management undertake discretionary accounting policies that translate into altering of earnings (Beneish, 1999)

Literature Review

Ezrien, and Kamal et.al.(2016) has been studied on “Detecting Financial Statement Fraud by Malaysian Public Listed Companies: The Reliability of the Beneish M-Score Model” has been studied on various fraud recognize tools. In this study the researcher has been assesses the reliability of the Beneish M-Score model in detecting earnings manipulation and financial statement fraud committed by Malaysian public listed companies prior to public announcement. The researcher has taken as sample consists of 17 public listed companies of which their directors and top management have been charged and prosecuted by the Securities Commission Malaysia (SC) for committing fraudulent reporting and misstatement from 1996 until 2014. The results show that the Beneish M-score model is reliable in detecting earnings manipulation and financial statement fraud by 82% in 14 out of 17 listed companies charged for fraudulent financial reporting. The findings provide support for the application of the Beneish M-Score model by the management of the company to check for any irregularities in firms' financial report so that adjustment can be made before submission to Bursa Malaysia to prevent from any potential backlash that could damage firm reputation. The model application is likewise beneficial to prospective and existing shareholders to assist their investment decision making in reducing risk of losses due to fraud. In addition, the findings suggest that the model can be applied by researchers, auditors, and enforcement agencies as an effective detection tool to signal potentially fraudulent reporting companies in Bursa Malaysia for further investigation and enforcement action.

Irwandi, Ghozall, Faisal and Pamungkas et.al.(2019) examined on,” Detection fraudulent Financial Statement: Beneish M-Score Model.” In this research paper the researcher has analyzed financial stability, nature of industry, and audit opinion on fraudulent financial statements. Furthermore, to analysis financial stability, the nature of industry, audit opinion on

real earnings management, to analysis the real earning management on fraudulent financial statements .The population had been taken from all manufacturing companies listed on the Indonesia Stock Exchange during the period 2013-2017. The sampling technique was carried out by purposive sampling to produce 130 samples. In this study the technical analysis model uses path analysis and SPSS version 22. The results of this research are financial stability and nature of industry has a significant effect on fraudulent financial statements. Audit opinion has not effect on fraudulent financial statements Financial stability and Nature of industry has a significant effect on real earnings management. Audit opinion has not effect on Real Earnings Management. real earning management significantly influences fraudulent financial statements. Real earnings management can mediate the relationship of financial stability, nature of industry on fraudulent financial statements. But, audit opinion cannot mediate on the relationship on fraudulent.

Carthy John Mac (2017) studied on, “Using Altman Z-Score and Beneish M-Score Models to Detect Financial Fraud and Corporate Failure: A Case Study of Enron Corporation.” The objective of this study is to determine whether Altman Z-score and Beneish M-model could detect financial fraud and corporate failure of Enron Corporation. Five-year financial information was collected from the US SEC Edgar database covering the period 1996 to 2000. The Beneish model revealed that the financial statements for the five years studied were manipulated by management. On the basis of the analysis, the researcher argued that stakeholders would be better protected when the two models are used simultaneously than when only the Altman Z-score is used. The paper recommended that Altman Z-score and Beneish M-Model should be used together as an integral part of every audit.

Lotfi Nasrin and Chadegani Arezoo Aghaei (2017) Analyzed on, “Detecting Corporate Financial Fraud using Beneish M-Score Model.” The Researcher focused about the detection of financial fraud as an important issue and ignoring this issue may cause financial and non-financial losses to individuals and organizations. The aim of this study is to test the ability of the Beneish M-Score Model for detecting financial fraud among companies listed on the Tehran stock exchange. The research sample consists of 137 companies listed on the Tehran Stock Exchange for a period of 11 years (2005-2015). Logistic regression analysis is used to test the research hypothesis at the level of 5% error. The results show that the accuracy of the Beneish M-score model for detecting fraudulent financial reporting is 66/03 percent. In general, based on the logistic regression analysis, despite the existence of valid theoretical foundations, it seems that it is not possible to detect financial fraud in companies listed on the Tehran stock exchange using Beneish M-score model. In other words, based on financial information of companies listed on Tehran Stock Exchange, Beniesh model is not a suitable model for detecting fraud and we need to develop a new model to detect fraud in financial reports

Mehta and Bhavani (2017) have used, “The forensic tools to detect fraud in financial statements of Toshiba Corporation of Japan during 2008 till 2014.” This study compared the results of three tools; the Beneish Model, the Altman Z-score model, and Benford’s Law. They conclude that although all three tools are useful for indicating red flags of fraud, none of them could pinpoint the exact area or location of the fraud. In fact, many researchers have been conducted regarding fraud detection which indicates the importance of fraud and its discovery in financial statements. But in Iran, the model of Beneish and the ability of this model to detect fraud have not been considered. Therefore, in order to investigate the ability of this model to detect fraud in the financial statements of listed companies on the Tehran Stock Exchange,

Petrik Vladimír (2016) examined, the” Application of Beneish M-score on selected financial statements.” The study focused on the application of the fraudulent detection model Beneish M-score on the selected financial statements. Beneish M-score is used as a fraud detection technique. Through its application on financial statements, it helps to uncover companies that are likely to be manipulating their financial statements. Financial statements for the accounting period 2015 of an anonymous middle size Slovak company that manufactures office machinery. The objective of the article was to apply the Beneish m-score to recent financial statements of Slovak companies. The analyzed company had a Beneish m-score value of -6.84 which in comparison with a reference value of -2.22 means that the company did not manipulate its financial statements. The application of this model to a company's financial statement and detection of possible manipulation of financial statements might be useful for banks, investors, and creditors during due diligence or entering a new business relationship.

Methodology Adopted

The research paper is empirical in nature it explains through data collected from annual reports of Steel Companies in India. A total of ten companies were selected on the basis of market capitalization from the Bombay Stock Exchange from 2017-18 to 2021-22.

Objectives of Research

1. Study about Steel Companies in India.
2. Calculate various ratios to calculate financial performance.
3. Use M - The score Model to evaluate malpractice by firms during the disclosure of earnings.

Hypothesis

H(null): Firms not likely to have manipulated their earnings.

H(A): Firms have manipulated their earnings

Data Analysis with interpretation

Table1

YEAR WISE COMPLINE INDEX SHEET FOR ALL 10 COMPANIES												
	JS W	APL APP LLO	JIN DA L STA IN	TA TA STE EL	KI OC L	SAI L	US HA MA RTI N	JIN DA L STE EL	SHY AM MET ELIC S	IS M T	LLO YDS	Aveg age
Financial Ratios Indexes (Avg. of 5 years)												

Day Sales in Receivables Index (DSRI)	0.91	0.97	1.15	1.38	1.36	1.08	1.10	1.06	1.13	0.84	1.06	1.09
Gross Margin Index (GMI)	1.14	0.91	1.04	0.96	-6.57	0.85	0.94	0.98	1.10	0.75	0.95	0.28
Asset Quality Index (AQI)	0.98	0.97	1.13	0.80	1.58	1.02	1.13	0.98	0.98	0.78	0.92	1.02
Sales Growth Index (SGI)	1.17	1.17	1.20	1.21	1.18	1.17	1.08	1.27	1.31	0.92	1.09	1.16
Depreciation Index (DEPI)	0.93	0.99	0.95	0.96	0.88	0.96	0.75	0.86	1.06	0.74	0.85	0.90
Selling, General, & Admin. Expenses Index (SGAI)	1.02	1.08	0.95	0.97	0.72	1.06	1.05	0.94	0.93	0.74	0.94	0.94
Leverage Index (LVGI)	1.00	0.91	0.85	0.93	1.07	0.90	0.79	0.86	1.01	0.69	0.85	0.90
Total Accruals to Total Assets (TATA)	-0.02	2.42	1.16	0.01	-0.97	0.00	0.67	0.01	-0.05	0.28	0.23	0.51
Beneish M Score	-2.45	8.92	3.36	-2.09	-1.21	-2.31	0.83	-2.20	-2.27	-0.30	-1.00	-0.06

Source: Created by Author

Financial Ratios Indexes (Avg. of 5 years):

- Day Sales in Receivables Index (DSRI):
 - Ranges from 0.84 to 1.38.
 - Represents how many days of sales are tied up in receivables. Higher values may indicate longer collection periods.
- Gross Margin Index (GMI):

- Ranges from -6.57 to 1.14.
- Reflects the profitability of the company. Negative values may be unusual and require further investigation.
- Asset Quality Index (AQI):
 - Ranges from 0.78 to 1.58.
 - Indicates the quality of the company's assets. Higher values suggest better asset quality.
- Sales Growth Index (SGI):
 - Ranges from 0.92 to 1.31.
 - Reflects the company's sales growth over the period. Higher values indicate higher sales growth.
- Depreciation Index (DEPI):
 - Ranges from 0.74 to 1.06.
 - Measures the extent to which a company's earnings are supported by its assets. Higher values suggest lower reliance on asset depreciation.
- Selling, General, & Admin. Expenses Index (SGAI):
 - Ranges from 0.72 to 1.08.
 - Indicates the efficiency of the company in managing selling, general, and administrative expenses.
- Leverage Index (LVGI):
 - Ranges from 0.69 to 1.07.
 - Reflects the extent of financial leverage used by the company. Higher values suggest higher financial leverage.
- Total Accruals to Total Assets (TATA):
 - Ranges from -0.05 to 2.42.
 - Measures the quality of earnings. Negative values suggest a conservative approach in recognizing revenues.
- Beneish M Score:
 - Ranges from -2.45 to 8.92.
 - Designed to detect earnings manipulation. Higher values may indicate a higher likelihood of earnings manipulation.

Interpretation:

- a. Each index provides insights into different aspects of the financial health and management of the companies.
- b. Negative or extremely high values in some ratios, such as GMI and TATA, may warrant further investigation.
- c. Comparison of these values with industry benchmarks or historical data for the same companies may provide additional context.

Table 2

FIRMS	AVERAGE OF INDEX OF RATIOS OF 5 YEARS							
	Day Sales in Receivables Index (DSRI)	Gross Margin Index (GMI)	Asset Quality Index (AQI)	Sales Growth Index (SGI)	Depreciation Index (DEPI)	Selling, General, & Admin. Expenses	Leverage Index (LVGI)	Total Accruals to Total Assets (TATA)

						Index (SGAI)		
JSW	0.905	1.135	0.9775	1.1725	0.925	1.0175	0.995	-0.0175
APL APPL O	0.965	0.9075	0.965	1.1675	0.985	1.0825	0.9125	2.4225
JINDA L STAIN	1.15	1.035	1.13	1.1975	0.95	0.95	0.8525	1.155
TATA STEEL	1.38	0.9625	0.7975	1.2075	0.96	0.965	0.93	-0.0125
KIOCL	1.355	-6.5675	1.575	1.18	0.88	0.72	1.065	0.9675
SAIL	1.0825	0.85	1.0175	1.17	0.9625	1.06	0.9	0
USHA MARTI N	1.095	0.94	1.1325	1.075	0.7525	1.05	0.7925	0.6675
JINDA L STEEL	1.055	0.98	0.9775	1.27	0.8625	0.9425	0.855	-0.0075
SHYA M METE LICS	1.1275	1.0975	0.9775	1.3125	1.06	0.93	1.0125	-0.05
ISMT	0.1375	1.3225	1.0125	1.1975	0.995	0.9675	1.0025	0.7075
LLOY DS	0.7675	0.43	0.98	0.825	0.93	1.2425	2.0925	0.4675

Source: Created by Author

Above table 1 shows the average index value between a current and previous year from 2017-18 to 2021-22. In the case of JSW, all ratios are positive except **Total Accruals to Total Assets** which is -.0175. API Applo all indexes of ratio are the nearest value to 1 it TATA ratio is 2.4225. KIOCL has 1.355(DSRI) , -6.5675(GMI), and other indexes are positive. Steel Authority of India a government organization, results in variable indexes, its Total Accruals to Total Asset ratio is zero. Usha Martin indexes are above one except for the last two. Jindal Steel and Shyam Metelic have good results except, in the index (TATA, -0.05), Both ISMT and Lloyds show a nice index of ratios.

Table 3:

FIRMS	AVERAGE OF RATIOS OF 5 YEARS
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	Day Sales in Receivables Index (DSRI)	Gross Margin Index (GMI)	Asset Quality Index (AQI)	Sales Growth Index (SGI)	Depreciation Index (DEPI)	Selling, General, & Admin. Expenses Index (SGAI)	Leverage Index (LVGI)	Total Accruals to Total Assets (TATA)
JSW	1.01	0.84	0.99	1.14	0.95	1.04	1.22	0.10
APL APPLLO	0.79	1.12	1.04	1.20	0.94	0.98	0.94	0.44
JINDAL STAIN	0.65	0.91	0.99	1.10	0.93	1.05	1.32	0.39
TATA STEEL	0.95	0.76	0.98	1.07	1.00	1.09	1.55	0.21
KIOCL	0.57	1.08	1.00	1.17	0.97	1.01	1.11	0.41
SAIL	0.78	0.78	1.01	1.01	0.93	1.11	1.51	0.45
USHA MARTIN	0.65	0.91	0.99	1.10	0.93	1.05	1.32	0.39
JINDAL STEEL	0.98	0.80	0.98	1.11	0.97	1.07	1.38	0.16
SHYAM METELICS	0.67	0.93	1.01	1.09	0.95	1.06	1.31	0.43
ISMT	0.81	0.84	1.00	1.08	0.94	1.07	1.35	0.32
LLOYD S	0.85	0.91	1.00	1.13	0.95	1.04	1.26	0.29

Source : Created by Author

Table 3 provided various financial ratios for different companies, using different indices such as Day Sales in Receivables Index (DSRI), Gross Margin Index (GMI), Asset Quality Index (AQI), Sales Growth Index (SGI), Depreciation Index (DEPI), Selling, General, & Admin. Expenses Index (SGAI), Leverage Index (LVGI), and Total Accruals to Total Assets (TATA). Each company's values for these indices are also listed.

Let's break down the interpretation of some of these indices:

Day Sales in Receivables Index (DSRI):

- It measures how quickly a company collects its accounts receivable. Higher values may indicate a more efficient collection process.

Gross Margin Index (GMI):

- It assesses a company's ability to maintain a favorable gross margin. A higher GMI suggests a better ability to control production costs.

Asset Quality Index (AQI):

- It evaluates the quality of a company's assets. A higher AQI generally implies better asset quality.

Sales Growth Index (SGI):

- It measures a company's sales growth performance. Higher SGI values may indicate robust sales growth.

Depreciation Index (DEPI):

- It assesses how well a company is managing its depreciation expenses. A lower DEPI might suggest that a company is using its assets more efficiently.

Selling, General, & Admin. Expenses Index (SGAI):

- It evaluates the efficiency of a company's selling, general, and administrative expenses. A higher SGAI may indicate effective cost management.

Leverage Index (LVGI):

- It measures the level of leverage a company has. A higher LVGI suggests higher financial leverage.

Total Accruals to Total Assets (TATA):

- It assesses the level of accruals in a company's financial statements. A lower TATA might indicate more conservative accounting practices.

Now, let's look at the values for a few companies:

- **JSW:** Generally, JSW seems to have relatively favorable values across most indices, indicating efficient operations and financial management.
- **APL APPLLO:** APL APPLLO has a mixed profile with strengths in certain indices and weaknesses in others.
- **TATA STEEL:** TATA STEEL has strong values in several indices, suggesting solid financial performance and management.
- **SAIL:** SAIL has mixed results, with strengths in some areas and weaknesses in others.

Table 4: Average

Beneish Model Table (Index Value)					
Firms	Year 2/ Year 1	Year 3/ Year 2	Year 4/ Year 3	Year 5/ Year 4	Average
JSW	-2.386	-3.072	-2.621	-1.701	-2.445
APL APPLLO	9.208	7.775	6.962	11.751	8.924
JINDAL STAIN	2.965	2.734	2.614	5.123	3.359
TATA STEEL	-2.659	-2.766	-0.179	-2.758	-2.0905
KIOCL	1.122	-12.535	2.243	4.343	-1.20675
SAIL	-2.472	-1.415	-2.725	-2.617	-2.30725
USHA	-1.056	1.094	1.053	2.236	0.83175

MARTIN					
JINDAL STEEL	-1.69	-1.415	-2.917	-2.768	-2.1975
SHYAM METELICS	-3.054	-1.002	-2.078	-2.948	-2.2705
ISMT	0.156	-1.769	0.186	3.039	0.403
LLOYDS	-0.108	0.022	-2.434	-2.995	-1.37875

In the table above, Let's interpret the table:

JSW:

- The M-Score ranges from -2.386 to -1.701 over the five years.
- The average M-Score for JSW is -2.445.
- The negative values suggest a lower likelihood of earnings manipulation.

APL APPLLO:

- The M-Score ranges from 6.962 to 11.751 over the five years.
- The average M-Score for APL APPLLO is 8.924.
- The consistently high positive values indicate a higher likelihood of earnings manipulation, which is a potential red flag.

JINDAL STAIN:

- The M-Score ranges from 2.614 to 5.123 over the five years.
- The average M-Score for JINDAL STAIN is 3.359.
- The positive values suggest a higher likelihood of earnings manipulation.

TATA STEEL:

- The M-Score ranges from -2.659 to -0.179 over the five years.
- The average M-Score for TATA STEEL is -2.0905.
- The negative values suggest a lower likelihood of earnings manipulation.

KIOCL:

- The M-Score ranges from -12.535 to 4.343 over the five years.
- The average M-Score for KIOCL is -1.20675.
- The wide fluctuation in values may indicate inconsistency or potential manipulation.

SAIL:

- The M-Score ranges from -1.415 to -2.725 over the five years.
- The average M-Score for SAIL is -2.30725.
- The negative values suggest a lower likelihood of earnings manipulation.

USHA MARTIN:

- The M-Score ranges from -1.056 to 2.236 over the five years.
- The average M-Score for USHA MARTIN is 0.83175.
- The fluctuating values may warrant further investigation.

JINDAL STEEL:

- The M-Score ranges from -1.415 to -2.917 over the five years.
- The average M-Score for JINDAL STEEL is -2.1975.
- The negative values suggest a lower likelihood of earnings manipulation.

SHYAM METELICS:

- The M-Score ranges from -3.054 to -1.002 over the five years.
- The average M-Score for SHYAM METELICS is -2.2705.
- The negative values suggest a lower likelihood of earnings manipulation.

ISMT:

- The M-Score ranges from -1.769 to 3.039 over the five years.
- The average M-Score for ISMT is 0.403.
- The fluctuating values may warrant further investigation.

LLOYDS:

- The M-Score ranges from -0.108 to -2.995 over the five years.
- The average M-Score for LLOYDS is -1.37875.
- The negative values suggest a lower likelihood of earnings manipulation.

Conclusion

The Beneish Model Table reveals important insights into the likelihood of earnings manipulation among various steel industry firms over a five-year period. JSW, TATA STEEL, SAIL, JINDAL STEEL, SHYAM METELICS, and LLOYDS consistently exhibit negative M-Scores, indicating a lower risk of earnings manipulation. In contrast, APL APPLLO and JINDAL STAIN consistently present high positive M-Scores, suggesting a potential higher risk of financial manipulation. KIOCL and USHA MARTIN demonstrate fluctuating M-Scores, signaling potential inconsistencies in financial reporting practices. It is crucial to interpret these findings cautiously, as the M-Score is a tool for detecting potential manipulation and not a definitive confirmation. Further analysis incorporating industry benchmarks, qualitative factors, and a deeper understanding of individual companies' financial practices is necessary to make well-informed assessments regarding their financial health and reporting integrity.

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