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CORPORATE SUSTAINABILITY WITH FORENSIC ACCOUNTING AND AUDITING

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Abstract

The purpose of this paper is to analyse the recent fraud case of ABG Shipyard Ltd. which outnumbered all the previous cases of frauds in India in magnitude and impact. The company belongs to one of the oldest and very prestigious ABG group and was once considered to be the largest private shipping yard. It had received license from the government to build warships and other vessels for Indian Navy. This study is the first attempt to analyse why a healthy and highly prosperous company went into liquidation and was hit by the fraud.

To analyse the reasons of fraud at ABG Shipyard Ltd., both the quantitative and qualitative tools have been made use of. The content analysis of the annual financial reports and audit reports of the company has been done for a period of seven years, from 2009-10 to 2015-16, along with the various news articles about the fraud. Z-Scores have also been computed using the financial data of nine years, from 2007-08 to 2015-16 to assess whether the information contained in the financial statements was already indicating the risk of bankruptcy of the company. M-Scores are also calculated to hint any possibilities of earnings manipulation in the financial statements.

The study finds that the erring auditors, tunnelling, self-dealing promoters and faulty management are the root causes of this fraud. Given that the regular auditing has continuously been proved ineffective in fraud detection, progressive use of forensic accounting and auditing is advised to detect and prevent frauds.

Key Words- Forensic accounting and auditing, Corporate sustainability, Beneish M- score, Altman Z-score, erring auditors, tunnelling, self-dealing promoters

1. Introduction

The repercussions of a fraud are huge and sufferers are many. The very existence and sustainability of an organisation is threatened due to frauds, which remain unchecked due to weak corporate governance norms and inadequacy of audit function in detection of financial statements frauds. This culminates into the closure of the entity at the cost of interests of various stakeholders. Forensic accounting and auditing not only helps in detection of frauds, but can also prevent the frauds. It can play an important role in strengthening the corporate governance practices in an organisation.

The recent ABG Shipyard Ltd. (ABG SL) fraud of approximately INR 300 billion hit the news headlines in February 2022 and shocked the entire nation. ABG SL, belonging to one of the oldest and very prestigious ABG group in India, building warships and other vessels for Indian Navy, was once considered to be the largest private shipping yard. Hit by the Global Financial Crisis of 2008 and the consequent failure to repay the loans led to the corporate failure and liquidation. The fraud at the company was detected through the forensic audit at the behest of SBI (State Bank of India) in 2019, but the case was registered by the Central Bureau of Investigation (CBI) in 2022. The question was raised against the government and also the banks as to why delays were there in filing complaints against the defaulting company. According to a report by Times of India (2022)[1], the law enforcement agency of the country, CBI, took over one and half years in acting over the complaint. There is an urgent need to understand and analyze the whole gamut of complexities involved and the various irregularities on the part of management over a considerable period of time, which remained unnoticed and escaped from the eyes of regulators and enforcement agencies, and thus, culminating into such a disaster costing many their life-earnings.

2. Objective of the Study

This study has been undertaken to analyse the recent fraud case of ABG SL (ABG Shipyard Ltd.), which outnumbered all the previous cases of frauds in India in magnitude and impact. An effort has been made to analyse why a healthy and highly prosperous company went into liquidation and was hit by the fraud. There were delays in filing complaints by the bankers against the defaulting company, even when the account was declared an NPA (Non-performing Asset) in 2013. The action on such complaints was also delayed on the part of law enforcement agency. This study is undertaken to understand and analyze the whole gamut of complexities involved and the role of forensic accounting and auditing in the process.

3. Recent Literature and Research Gap

3.1 Financial Statements Frauds

According to a survey conducted by Deloitte in 2021, financial statements frauds (20.96%) are likely to be most prevalent amongst various kinds of frauds after cybercrimes (23.90%) (Chatterjee, 2021). Beasley (1996) found that there are generally two ways to conduct financial statements fraud- showing excessive income and assets. There are various ways in which a financial statement fraud can occur- creation of special purpose entities for the concealment of huge debts, showing fictitious revenues or excessive recognition of revenues and non-writing of bad debts to present a rosy picture of the financial condition to mislead the

[1] *(https://timesofindia.indiatimes.com/business/india-business/explained-what-the-sbi-abg-shipyard-rs-22892-crore-controversy-is-all-about/articleshow/89607587.cms? utm_source=+contentofinterest&utm_+medium =text&utm_campaign=cppst)*

investors, non-recognition of goodwill in merger and its improper accounting, inflating the figures of cash in hand, overvaluation of assets, showing non-existent expenses and losses and many others (Zopounidis *et al*., 2000).

3.2 Inadequacy of Audit Function

"An audit is an independent, objective and expert examination and evaluation of evidence", (Hayes *et al*., 2007). However, an auditor can only check the compliance of financial statements with the applicable accounting standards and accounting policies of the company, and the legal determination of occurrence of fraud lies beyond the scope of his duties (Vanasco, 1998). It is extremely difficult to unearth financial statements frauds through a routine auditing procedure (Cynthia, 2005). It has been observed in many cases of fraud that while the financial statements were duly approved by the auditors, it contained material omissions and misstatements which ultimately led to bankruptcy and sinking of the corporate, leading to massive losses to the poor investors and other stakeholders (Owojori and Asaolu, 2009).

Fanning *et al*., (1995) gave three reasons for inadequacy of audit function to detect frauds- insufficient knowledge about forensic accounting techniques, lack of experience in fraud detection and use of newer methods and schemes by managers to conceal the crucial information. Moreover, the huge remuneration packages offered to auditors to provide a clean chit has proved to be the reason behind ineffective discharge of duties by the auditors in many cases of frauds (Ozili, 2020). The role of even Big Four auditors and many reputed auditing firms have been questioned in a number of fraud cases worldwide. The role of Deloitte in fraud cases of WGTC (Walsh Greenwood Trading Company) and Longtop Financial Technologies Ltd., PWC in case of Satyam scandal, KPMG in case of Xerox scam and Arthur & Anderson for the frauds in Enron, World com, and Adecco were highly criticized (Blythe, 2020). It is because of the insufficiency of the conventional accounting and auditing function that the use of forensic accounting and auditing tools and techniques is increasing at an exponential rate to detect frauds.

3.3 Emergence of Forensic accounting

Forensic accounting and auditing is simply the employing of accounting, auditing & investigative skills taken together (Alshurafat, 2021). It involves the use of scientific techniques and analytical methods for detection of frauds and this is done to gather evidence which can be presented in courts of law. "Forensic accounting is often seen as a facet of accounting that's suitable for legal review and offers the very best level of assurance", (Apostolou *et al*., 2000). Though the Forensic accounting and auditing concept is many decades old, the ever-increasing frauds and white-collar crimes have brought it to the limelight recently (Oyekdon, 2015). According to Peterson (2015), the regulators in future would be more concerned about the fraud perpetrators who use more of technical accounting knowledge and skills in committing frauds and thus, the use of forensic auditing tools is must. Forensic audit is something which could complement the statutory audit, and thereby enhance the quality of the function and improve the quality of the audit report (Madumere, 2013). After Enron case, Rajat Gupta case and Satyam case, wide use of forensic accounting is made worldwide. Very few Chartered accountants' firms have a separate practice for examination of frauds. The formation of Serious Fraud Investigation office in India is a landmark creation in this respect (Supriya, 2019).

3.4 Early detection and Timely Prevention of frauds

Early detection of frauds and prevention is always desirable to take timely actions and minimise the brunt of losses. Beneish and Nichols (1997) suggested that investors do not make use of publicly available information to detect frauds. Amongst the various forensic accounting tools available, Beneish M-Score model indicates the manipulation of financial statements and Altman Z-Score predicts the bankruptcy of the organisation, based on the information contained in financial statements and computation of various ratios in the process. One of the oldest types of research on predicting insolvency through the use of financial ratios was conducted by Beaver (1966). He mentioned about the 'trend effect', which means the signs of failure are indicated in ratio analysis as early as before five years of failure; and become increasingly apparent each succeeding year. Financial ratios models help investors distinguish good firms from bad (Korcan *et al*., 2013). Many more models have been developed in the field, but Bellovary *et al*. (2007) opined that the focus should be on using the existing models by bankers, auditors, investors, lenders, analysts etc. and not on the development of new models. The real purpose of accounting to provide a true and fair view of the financial position of an organisation is never served to the fullest satisfaction of the various users of financial statements, thus, some mechanism should be there to analyse their reliability and to identify the risk points; and then a detailed assessment can be done to check the level of manipulations, if any (Drabkova, 2016). Insights must be drawn to prevent such yet another failure after Enron and many others, mostly due to agency problem[2] and tunneling effect[3] (Shirur, 2011; Daily and Dalton, 2004).

3.5 Research gap

In view of the above, it is important to have a framework to analyse the specific patterns present in virtually every case of fraud. ABG SL fraud case is the most recent and the biggest fraud case in Indian history. This study is the first attempt to analyse this fraud and draw implications for future. This will help in indicating the modifications required in the structural patterns of audit and corporate governance to root out the possibilities and temptations of fraud. Timely measures taken will ensure the corporate sustainability and thus, very important to protect the interests of various stakeholders.

4. Methodology

To analyse the reasons of fraud at ABG Shipyard Ltd., both the quantitative and qualitative tools have been made use of. The content analysis has been done for the annual financial reports and audit reports of the company for a period of seven years, from 2009-10 to

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[2] *Agency problem arises in all kinds of fiduciary relationships, like in a company, the board of directors (the management) are expected to act as agents of shareholders, the owners (the principal) of the company and should act in the best interests of the principal. When they give priority to their personal interests to the extent of harming the interests of the principal, it causes a conflict and decisions taken by them may prove detrimental to all involved.*

[3] *Tunnelling is the practice of diverting business assets and funds in own favour by the majority shareholders through exercising their influential right in decision making of the company.*

2015-16, along with the various news articles about the fraud. Z-Scores have also been computed to assess whether the information contained in the financial statements were already indicating the likely insolvency and bankruptcy of the company, using the financial data of nine years, from 2007-08 to 2015-16. M-Scores are also calculated to hint any possibilities of earnings manipulation in the financial statements.

5. Analysis of the Case

5.1 ABG Shipyard Ltd.

Incorporated in 1985, India (Mumbai) based ABG Shipyard company having yard at Surat, Gujrat was a leading private shipbuilder belonging to ABG group of companies. It has built ships for the Indian Navy as well as the Indian Coast Guard. The company was doing fairly well and achieved the status of largest private sector shipyard in India with strong client base all around the world in 1991. It acquired another shipyard at Dahej, Gujrat and also Western Shipyard, a ship repair yard based in Goa, which was undergoing financial restructuring. According to the company's perspective, the ship repair business fetches higher operating margins compared to shipbuilding and thus would bring more consolidated margins. A massive opportunity came its way in the form of International Maritime Organization (IMO) guidelines, whereby all single hull tankers were to be phased out by 2010 and all future tankers had to be double hull to reduce the pollution (Nair, 2022). However, the company could not exploit the opportunity and rather, the following period led to corporate failure.

5.1.1 The Rise and the Fall.

According to an online report by ICRA Ltd. (Investment Information and Credit Rating Agency), total revenue of the company grew at a CAGR (Compound Annual Growth Rate) of 35 per cent during FY 2006-2010. At EBIT (Earnings Before Interest and Taxes) levels, the company was commanding slightly better margins than the closest competitor Bharti shipyard. The EPS (Earning Per Share) grew from INR19.8 to INR 42.80 in the said period. Debt-equity ratio for the said period increased from 0.21 to 1.93 gradually. Interest coverage ratio fell from 8.2 to 2.7 over the five years, while the dividend pay-out ratio increased from 12 % to 40 % in FY 2009-10 and was same in FY 2010-11. The highest turnover was recorded in FY 2010-11 at INR 1 billion, but the net profits fell by 11% in FY 2010-11 from the previous year and by another 4% in next year (FY 2011-12). The company continued employing more debts in its capital structure, the debt-equity ratios for FY 2011-12 and FY 2012-13 were still within acceptable range being debt twice the equity. However, then it started getting out of proportion, 4.05 in FY 2013-14, and completely blew out in FY 2014-15, arriving at 14.42. The profits were sustained until the end of FY 2012-13, but started falling thereafter. A loss of INR 2 billion was incurred in FY 2013-14, which increased to INR 8 billion in 2014-15 and to a massive INR 37 billion in FY 2015-16. No dividends were paid from FY 2011-12 onwards.

The company attributed the failure to cancellation of new orders, expiry of subsidy scheme of the government, high costs of financing and low-capacity utilization of its Dahej Shipyard at Surat. However, huge remunerations to directors were paid for all these years and was on a steady rise even in the phase of losses. Remuneration of INR 11.6 million was paid in FY 2009-10, which got doubled after a few years (INR 23.2 million in FY 2014-15) with hefty increases every year despite the fall in profits and in the face of severe financial difficulties. Quite shockingly, in the next FY 2015-16, it grew to INR 30.6 million, another increase of 31 percent, which is totally unjustified in the scenario of continued defaults by the company towards statutory dues and lenders.

When the company could not pay its loans in 2013, the lenders granted loan recast, loan moratoriums and credit facilities under the corporate debt restructuring (CDR) scheme. When the restructuring requirements were not fulfilled, then again in 2015, another attempt toward restructuring was made through Strategic Debt Restructuring Scheme, where lenders could convert their debt into equity and by October 2016, 49% equity was acquired by them. In August 2017, ICICI, the largest lender filed the application for insolvency resolution (PTI, 2019) and ABG SL is undergoing liquidation process before NCLT (National Company Law Tribunal).

5.1.2 The Promoters Group.

The figures in the Table I show that the promoters had been holding majority of shares of the company throughout. ABG International Private Ltd. is the body corporate in the promoters' group and remaining shares were held by Mr. Rishi Aggarwal who acted as chairman and managing director of the company. The sharp decline in shareholding in FY 2015-16 was due to invocation of pledge by the lenders of the company.

Table I: Shareholding of ABG Shipyard Ltd. by the promoters

Year	**Promoters and Promoters' group (in percent)**	**ABG International Private Ltd.* (in percent)**
2009-10	57.14	56.40
2010-11	60.72	59.99
2011-12	61.83	61.09
2012-13	66.81	66.08
2013-14	67.92	67.19
2014-15	59	57.97
2015-16	33	32.57

Source: Annual Reports of the company

**ABG International Private Ltd. is the body corporate in promoters 'group.*

5.2 The Infamous Fraud

The fraud at ABG Shipyard hit the news headlines in February 2022 reporting that the company had defrauded a consortium of 28 banks of INR 22,482 crores. The amount outstanding towards the lead banker ICICI was INR 7,089 crores, INR 3,639 crores were due towards IDBI Bank, INR 1,614 crores towards Bank of Baroda, INR 1,244 crores to Punjab National Bank, INR 1,327 crores to Exim Bank, INR 1,244 crores to Indian Overseas Bank and INR 719 crores to Bank of India (Bhardwaj, Feb,2022). In public domain, the last annual report of the company traceable is for the financial year 2015-16, in which the audit report mentions about various judicial proceedings going against the directors and officials of the company for long outstanding statutory dues and continued defaults towards various lenders and creditors. According to newspapers reports, one of the lenders, the SBI bank had identified the fraud in 2019 revealed through the forensic audit conducted by EY LLP in January 2019. SBI filed the first complaint only in November 2019 and then again in December 2020, a fresh and more comprehensive complaint was filed after deliberating the circumstances of fraud and the requirements of CBI by the joint lenders. The case was registered by CBI on 7 February, 2021 and consequently, the company and its holding company ABG International Private Ltd. were booked. Thirteen premises of the company in Surat, Bharuch, Mumbai and Pune were searched and the company's chairman and managing director Rishi Kamlesh Aggarwal, former executive director Santhanam Muthaswamy and directors Ashwini Kumar, Sushil Kumar Aggarwal and Ravi Vimal Nevatia were booked. Various charges are levied against them under Indian Penal code (IPC) and The Prevention of Corruption Act on account of cheating and criminal conspiracy, criminal breach of trust and misuse of official position, diversion of funds, misappropriation of assets and money laundering (Bhardwaj, 2022).

5.2.1 The Forensic Audit and the Investigation.

The 'critical period' of occurrence of fraud was FY 2005-2012 (Ohri,2022). According to the findings of the forensic audit report by EY, the bank money was used to pay to the related parties, for paying their expenses and repayment of their loans and letters of credit. Funds of more than INR 1 billion were diverted to Second Land Developers between FY 2008-14, resulting in undue gains to the promoters. On the basis of inspection of ledgers of the group companies, it came out that properties were purchased out of security deposits provided by ABG SL, not shown in its books. There were lots of circular transactions, where the money paid was sent back to same accounts, then routed to different accounts of different entities. The company used 38 related overseas companies and 60 Indian firms to divert the loan amounts. After securing permissions to invest in overseas subsidiaries, huge sums were siphoned off for some other purposes. The investigations also revealed that back in 2007, the company was allotted a plot at half of the prevailing market price at that time by GIDC (Gujarat Industrial Development Corporation), which was red flagged in the CAG (Comptroller and Auditor General) report in 2014. It was also found that the company did not pay lease rental to Gujarat Maritime Board (GMB) and no action was taken against it (Ohri,2022).

5.2.2 The Hardest Hit.

The most severe blow of the scam is to the employees of the company. They were not paid for full five years (FY 2016-2019). In addition, they were not given their PF (Provident Fund) and gratuity. The work experience certificates, salary certificates or relieving letters were not issued to them either, due to which they remain unemployed or were forced to accept contract jobs, earning significantly less than the earlier amount. The company fired 30-40 % of the workforce in 2015. Out of the claims of INR 1.13 billion submitted by 873 employees and ex-employees, only a sum of INR 887 million was verified and accepted, and is still outstanding. This is other than INR 1.68 billion of PF and TDS (Tax deducted at source) that was not deposited by the company (Suresh,2022).

5.3 The Role of Auditors

The statutory auditors of the company for the period 2008-16, Nisar and Kumar were called by SEBI (Securities and Exchange Board of India) in 2019 to explain their failure to report the fund diversion by the company in their audit report. In his settlement application, MN Ahmed, the partner of Nisar and Kumar provided that the said non-disclosure didn't have any wide market impact and he had not derived any personal benefit out of this default. He paid a meagre settlement fee of INR 27.5 lakhs. He also raised the plea that he had ceased to be an Indian Citizen at the time of case against him and had retired from the profession (The Economic Times, 2022). This is an irony that he was able to make settlement at such a low fine, when he had drawn huge sums from the company for the audit services, in which he did not do the professional justice. As is clear from the following section, the irregularities in the operations of the company were not fully disclosed until 2015-16, when the situation had completely gone out of control.

5.3.1 The Highlights of the Audit Reports.

For all the years under study, the audit reports expressed full compliance with accounting standards, no discrepancies in assets and inventory records after physical verification, none of the directors being disqualified, non-acceptance of deposits from public and no fraud reported or noticed for all the years under study. Only for the FY 2015-16, it was mentioned that physical verification could not be carried out for Dahej shipyard and inventories were lying with customs or bonded warehouses. A seemingly insignificant disclosure was made for the years 2009, 2010 and 2013, with respect to non-adoption of AS 30 (Indian Accounting Standard that deals with principles of hedging) by the company, which was defended at the same time by stating that the required principles were applied for the firm commitments payable and receivable. The material weakness in internal control system of the company was not reported until 2015-16, therein it was stated that there was no internal audit system and there was a lack of trained person to ensure compliance with various laws and regulations in a timely manner. But after mentioning these points, the conclusion drawn by the auditor was that there were adequate internal financial controls in place which were operating effectively.

5.3.2.1 Huge Corporate Group Guarantees and Loans & Advances to Related Parties.

Auditors reported that the company gave guarantees of INR 10 billion in FY 2009-2010, INR 18 billion in FY 2010-11, INR 20 billion in FY 2011-12, INR 21 billion in FY 2012-13 and INR 22 billion in FY 2015-16 for credit facilities taken by body corporates in the group from banks and financial institutions. These were huge sums and showed a continuous rising trend over the years, but the terms and conditions in the opinion of auditors were not detrimental to the interest of the company. Significant amounts of short term funds being used for long term purposes for projects under construction was also reported for all the years. Loans and advances with no stipulations for repayment and rate of interest chargeable were granted to related parties, average sum standing at around INR 3 billion every year. Very conveniently, the auditors opinionated that the terms of loans did not seem prejudicial to the interests of the company.

5.3.2.2 Outstanding Statutory Dues.

A statutory due of service tax related to years 2004-05 to 2008-09, of INR 25 million under Finance Act, 1994 were reported as outstanding in 2011, which was not reported in any of the previous year shockingly. The said due remained outstanding in the next year also. In FY 2012-13, defaulted amounts of INR 218 million of Income tax, INR 10 million of TDS, INR 25.8 million of Service Tax and INR 76.5 million of Excise Duty were tabulated. For FY 2013-14, it was reported that the company was generally late in depositing the various statutory and it had defaulted in payment of Income Tax dues of INR 592 million, TDS of INR 72.1 million, PF of INR 38.7 million and Profession Tax of INR 9 lakhs. It also defaulted in payment of Service Tax of INR 135 million (from 2004-05 to 2010-11), Income Tax of INR 32.4 million (2003-04 to 2005-06) and Customs Duty of INR 144.3 million for FY 2012-13. The same status continued for FY 2014-15 and an another Gujarat VAT (Value Added Tax) of INR 33.7 million was outstanding. In FY 2015-16, there were continued defaults in such statutory dues and the income tax dues increased to whopping INR 446.6 million.

5.3.2.3 Mounting Debts

No defaults in payments of any loans or interests on any loans were mentioned in the audit reports of the company, until FY 2012-13, wherein the principal and interest to banks amounting to INR 9.52 billion and INR 1.99 billion respectively were outstanding for more than 182 days. This delay increased to 567 days and to the amounts of INR 19.15 billion and INR 2.14 billion respectively in FY 2013-14. In FY 2014-15, it further went up to 712 days, though the dues dropped marginally. And then, for FY 2015-16, a long list of outstanding amounts to various banks were reported, with as big as overdue period of 1078 days towards Deutsche Bank and highest sum amongst all, INR 153.9 million towards ICICI bank. According to the audit report, a total of INR 557.8 million was due towards 24 banks, INR 162 million towards two financial institutions and INR 663.3 million towards debentures issued to LIC. It has been stated above that according to newspapers' reports, the company had defrauded a consortium of 28 banks of a voluminous sum of INR 228 billion in total. Clearly, full disclosures were not made regarding the pending dues. It is difficult to understand how could the company survive without paying such huge statutory dues and how it could manage obtaining such huge loans from multiple banks despite having defaulted on existing loans for such long periods of time.

5.3.2.4 The Qualified Opinion

Despite the continued and rising defaults in repayment of principal sums and interests towards the lenders and statutory dues; and granting of huge loans and advances to related parties, the auditors did not qualify their opinion in any of the audit reports until for FY 2015-16, wherein qualified opinion was given for a number of issues. They reported that the construction activities were stalled for a very long period of time, because of which technical evaluation to determine the impairments in assets could not be taken up. But the management maintained that the recoverable amount of the assets was more than their carrying value and thus no impairment losses were there. Auditors also reported that various loans, advances and receivables from related parties (INR 17.56 billion) and from the private companies in which directors were directors/members/partners (INR 1.65 billion) were long overdue, but management said the balances were good and still recoverable and as such no provisioning was required to be made in respect of these. Loans were interest-free and conditions for repayment were not decided, so according to auditors these were prejudicial to the interests of the company. Management said that given the nature of the relationship with these companies, charging of interest was not expedient.

It was reported that the company had defaulted in repayment of loans and covenants of CDR scheme of lenders, due to which many civil and criminal proceedings were going on seeking compensation and penal action. Investments in subsidiaries and related parties amounting to INR 2.20 billion were reported for the year, but the impairment in the investments value could not be ascertained because the audited financial statements of these companies were unavailable. The management said these investments were long term in nature and any impairment was not required to be adjusted, and this was when company was incurring continuous losses and its net worth was completely eroded.

5.4 ABG Shipyard's Z-Score and M-Score

The Altman Z-Score and Beneish M-Score in this section were generated using financial data of ABG Shipyard Ltd. from 2007-08 to 2015-16. i.e., during a nine-year term. While the Altman Z-Score predicts bankruptcy, the Beneish M-Score reveals the company's 'Earnings Manipulation' to deceive stakeholders. These are the forensic accounting tools that employ a variety of financial ratios to calculate the score.

5.4.1 Altman Z-Score.

Edward Altman created the Z-Score in 1968, and an updated model was proposed in 2002.

$$Z = .012X_1 + .014X_2 + .033X_3 + .006X_4 + .999X_5$$

where X_I is calculated by dividing the working capital with the total assets; for X_2, Retained Earnings are divided by total assets and for X_3, it is earnings before interest and taxes which is divided by the total assets. The market value of equity is divided by the book value of total debt for X_4 and sales are divided by total assets for X_5.

Table II given below indicates that the scores so computed for the company were less than 1.8 for all the years under study, indicating that financial affairs of the company were not running in the desired direction and the bankruptcy was already in sight.

Table II: Computation of Z-Score

Year	X_I	X_2	X_3	X_4	X_5	Z-Score
2007-08	-0.30137	0.181561	0.145708	2.440318	0.439853	0.46
2008-09	-0.33255	0.131457	0.108234	0.12828	0.335823	0.34

2009-10	-0.39557	0.14641	0.119163	0.297981	0.335112	0.34
2010-11	-0.08248	0.125552	0.08991	0.232569	0.273123	0.28
2011-12	-0.06063	0.127242	0.078125	0.200605	0.267271	0.27
2012-13	-0.12265	0.116099	0.067738	0.132249	0.195707	0.20
2013-14	0.033066	0.083729	0.080504	0.096081	0.129961	0.13
2014-15	0.046307	0.011367	-0.00251	0.085715	0.031577	0.03
2015-16	-0.21316	-0.32091	-0.13837	0.01385	0.003089	-0.01

Source: 'The authors'

5.4.2 Beneish M-Score

Professor Messod Beneish provided the M-Score in 1999, and it is based on a combination of the following eight indices:

1. **DSRI =** Days' Sales in Receivables Index.
2. **GMI =** Gross Margin Index.
3. **AQI =** Asset Quality Index.
4. **SGI =** Sales Growth Index.
5. **DEPI =** Depreciation Index.
6. **SGAI =** Sales, General and Administrative Expenses Index.
7. **LVGI =** Leverage Index.
8. **TATA =** Total Accruals to Total Assets.

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

In the following Table III, the M-Score of more than -2.22 for all the years suggests that ABG SL is highly likely to be a manipulator.

Table III: Computation of M-Score

Year	**DSRI**	**GMI**	**AQI**	**SGI**	**DEPI**	**SGAI**	**TATA**	**LVGI**	**M-Score**
2007-08	0.809571	0.914981	1.321909	1.37265	1.25448	0.713296	0.966697	0.368691	-0.42305
2008-09	3.219937	1.047708	0.6341	1.460655	0.649914	1.238979	1.303192	0.388124	1.486138

2009-10	1.393795	1.024176	0.985063	1.28002	0.659339	1.746462	0.927507	0.402124	-0.12352
2010-11	1.531042	1.031916	1.04236	1.149043	1.240795	0.938638	1.696972	0.083509	-1.62346
2011-12	0.440608	0.996768	0.991891	1.147899	0.757343	0.996723	1.010106	0.315956	-1.41999
2012-13	1.005198	0.897424	1.041401	0.878257	1.032629	0.972057	1.022743	0.20244	-1.67291
2013-14	3.089562	0.465563	0.996324	0.773063	0.945942	3.529301	1.046141	0.152217	-0.78782
2014-15	2.49857	7.208403	1.04608	0.240992	1.034735	2.065135	1.120859	0.10085	1.77145
2015-16	13.7938	-0.00602	1.000695	0.087947	1.1986	4.58172	1.343692	0.064545	7.542249

Source: 'The authors'

6. Conclusion

It can be concluded that the erring auditors, self-dealing promoters, tunnelling and faulty management are the root causes of this fraud. Many unethical practices were going on like granting of huge corporate group loans out of the bank money, use of long term funds to finance the working capital, excessive directors' compensation, transfer of company's assets to affiliated firms at substantially low prices, diversion of funds to shell companies. In the disguise of diversification strategy, that is entering into ship repairs business, a loss making company (Western Shipyard) was acquired to siphon off the funds. The alarming fact is the long list of over-pending statutory dues for quite substantial number of years in a row, which surprisingly were ignored by bankers to determine the credit worthiness for granting of loans as well as approving of corporate debt restructuring scheme. The role of auditors is questionable as they turned a blind eye to a number of objectionable issues, failing to report many and delaying others to the maximum extent possible. According to newspapers reports, one of the lenders, the SBI bank had identified the fraud revealed through the forensic audit conducted by EY in January 2019, but the SBI filed the first complaint only in November 2019 and then again in December 2020, a fresh and more comprehensive complaint was filed. Lots of hue and cry was raised for alleged delay in filing of complaint by the bankers in the media. It was defended saying that the process of fraud detection usually takes a period of 52 to 56 months to gather the elements of fraud and they were rather early in detecting the fraud. The delay in registration of case and taking of action by the law enforcement agencies was also highlighted by the media. The justification offered was that whenever a fraud is declared by an initial complaint, more information is required to be gathered before any action can be taken legally, and this case involved massive data and the involvement of 28 banks and thus, a thorough scrutiny was needed to act upon the complaint before registering the FIR (First Information Report).

7. Implications for theory and practice

7.1 Fraud prevention and detection through forensic accounting

The two forensic accounting tools used in the study namely the Z score and M score are clearly hinting the earnings manipulation and likely insolvency of the company. These tools should be made use of to detect the destructive self-dealing activities on the part of promoters and management at an early stage to ensure corporate sustainability. It is important to expedite the proceedings of criminal prosecution of promoters and all others responsible, to discourage other people to resort to such practices. The forensic audit report conducted by EY on the behest of SBI is likely to be the key prosecution evidence. The unprecedented growth in frauds has prompted the organizations to rethink about their attitude and approach towards forensic accounting and auditing, which hitherto was more casual and non-serious. Leaving aside the monetary loss suffered by an organization on account of fraud, the negative publicity by the media and the consequent loss of reputation and confidence of the investors should act as sufficient motivation for the regular use of service of forensic accounting experts to design, review and strengthen the internal controls and audit and corporate governance norms to protect the interests of various stakeholders. It is high time to promote the awareness about the forensic accounting and auditing. The limited role of auditing and its inadequacy in fraud detection and fraud prevention is hard to ignore any further. The high cost of forensic accounting services or the non-availability of adequately trained forensic professionals are no longer the plausible reasons for not employing the forensic accountants to investigate fraud.

7.2 Mandating of Additional financial reporting disclosures

The ever rising frauds have prompted for many additional disclosures being made mandatory as part of their financial statements for the companies, as per the amendments in Schedule III of the Companies act, 2013 notified by Ministry of Corporate Affairs (MCA) in 2018, effective from 1 April, 2021. The companies have to disclose the promoters' names, number of shares held, percentage of total shares and percentage change during the year. A more detailed ageing schedule has been prescribed for trade receivables for disclosing the disputed and undisputed balances, further classified as 'considered good' or 'credit impaired'. Furthermore, the loans and advances granted to promoters, directors, key managerial personnel (KMPs), along with the related parties are to be disclosed, that are repayable on demand or are given without specifying any terms or period of repayment.

Also, the details of all immovable properties whose title deeds are not in the name of the company are to be disclosed, and also of any Benami property(s) held. If the company has any transactions with struck-off companies, details of the company(s), nature of transaction(s) and relationship with the company need to be disclosed. The ageing information and other details for projects in progress, projects temporarily suspended, projects whose completion is overdue and those whose cost exceeded the original plan also have to be disclosed. The reasons and whereabouts of utilization of borrowings from banks and financial institutions for purposes other than the underlying specified purposes are required to be stated. In case the company has either received or invested funds by or on behalf of other company (ultimate beneficiaries/ funding party), disclosures have been mandated about the utilization of such funds. In case any bank or financial institution has declared the company to be a 'wilful defaulter', the details of default are required to be disclosed. The companies (Restriction on number of layers) Rules, 2017 have prescribed that no company shall have more than two layers of subsidiaries. The amendment requires the company to disclose the name and CIN (Corporate Identification number) of the company(s) beyond the specified layers and the extent of holding in those company(s).

7.3 Proposed policy changes

Besides the above, many policy changes have been proposed at the national level recently. For improving of audit quality, the authority of regulation of chartered accountants has been transferred from ICAI (Institute of Chartered Accountants of India) to NFRA (National Financial Reporting Authority). Risk management committees have been mandated for certain class of entities, which at present is limited to top 1000 companies based on market capitalisation under SEBI regulations. Tweaking of insolvency laws to shorten the time of insolvency application acceptance is also proposed, so that the risk of siphoning off the funds by the promoters of the defaulting company is reduced. The conduct of joint audit of holding and subsidiary companies for certain class of companies and holding of forensic audit has also been proposed. Hopefully, these proposed changes become part of the laws and interests of various stakeholders are protected.

8. References

Alshurafat, H. (2021) 'Is Forensic accounting a profession in Australia? A sociological perspective', *Meditari Accountancy Research,* Vol. 30 No. 2, pp.395-423.

DOI: https://doi.org/10. 1108/MEDAR-04-2020-0865

Altman, E. I. (1968) 'Financial ratios, discriminant analysis and the prediction of corporate bankruptcy', *The Journal of Finance*, Vol.23 No. 4, pp.589–609. https://doi.org/10.1111/j.1540-6261.1968.tb00843.x

Apostolou, B., Hassell, J. M. & Webber, S. A. (2000) 'Forensic expert classification of management fraud risk factors', *Journal of Forensic Accounting,* Vol. 1, pp.181-192. https://maaw.info/JournalOfForensicAccounting.htm

Beasley, M. (1996) 'An empirical analysis of the relation between board of director composition and financial statement fraud', *The Accounting Review*, Vol. 71 No.4, pp.443–455. http://lib.cufe.edu.cn/upload_files/other/4_20140522023523_7.pdf

Bellovary, J. L., Giacomino, D. E., & Akers, M. D. (2007) 'A Review of Bankruptcy Prediction Studies: 1930 to Present', *Journal of Financial Education*, Vol. 33, pp.1–42. http://www.jstor.org/stable/41948574

Beaver, W. H. (1966) 'Financial ratios as predictors of failure', *Journal of Accounting Research*, Vol. 4, pp.71–111. https://doi.org/10.2307/2490171

Beneish, M. D., & Nichols, D. C. (2007) 'The predictable cost of earnings manipulation', *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1006840

Bhardwaj, A. (2022). '5 years, 28 banks, Rs.23000cr debt-how ABG Shipyard pulled off 'India's biggest bank fraud', *The Print Essential,* 15 February. https://theprint.in/theprint-essential/5-years-28-banks-rs-23000-cr-debt-how-abg-shipyard-pulled-off-indias-biggest-bank-fraud/831696/

Blythe, S.E. (2020) 'Financial statement fraud: Lessons learned from selected U.S. legal cases in the past twenty years', *Journal of Modern Accounting and Auditing*, Vol. 16 No. 1. https://doi.org/10.17265/1548-6583/2020.01.001

Chatterjee, D. (2021). 'Fraud cases to rise in next two years; cybercrimes, financial statements scams to dominate: Deloitte', *Business Today*, 7 October. https://www.businesstoday.in/latest/corporate/story/fraud-cases-to-rise-in-next-two-years-cybercrimes-financial-statement-scams-to-dominate-deloitte-308711-2021-10-07

Cynthia, H. (2005, March/April). 'Analysis ratios for detecting Financial Statement fraud', *ACFE Fraud Magazine*. https://www.fraud-magazine.com/article.aspx?id=4294967726

Daily, C. M. & Dalton, C. R. (2004) 'Boardroom myths: Reconciling prescription and Research guidance', *Handbook of Business Strategy,* Vol. 5 No.1, pp. 15-18.

DOI: https://doi.org/10.1108/10775730410494044

Drábková, Z. (2016) 'Models of Detection of Manipulated Financial Statements as part of the Internal Control System of the Entity', *Oxford Journal of Finance and Risk Perspectives*, Vol. 5, pp. 230-234. http://www.acrn-journals.eu/resources/jofrp0501l.pdf

Fanning, K., Cogger, K. O., & Srivastava, R. (1995) 'Detection of management fraud: A Neural Network approach', *Intelligent Systems in Accounting, Finance and Management*, Vol. 4 No 2, pp.113–126. https://doi.org/10.1002/j.1099-1174.1995.tb00084.x

Hayes, R., Dassen, R., Schilder, A., and Wallage, P., (2007). 'Principles of Auditing. An Introduction to International Standards on Auditing', *Pearson Education Limited,* 2.1 ed. Available at http://library.wbi.ac.id/repository/211.pdf Accessed on 11 January, 2022. ICRA Online Ltd. (n.d.). 'ABG Shipyard Ltd.- Initiation Report'. Available at https://www.reportjunction.com/Researchreports/ABG-Shipyard-Ltd-Initiation-Report-8-946.htm Accessed on 15 Jan, 2022.

Institute of Chartered Accountants of India, (2022, January). 'Guidance note on Division II – IND AS Schedule III to the Companies Act. 2013'. Revised January, 2022 Edition, pp. 88-113. www.icai.org

Koracan Ak, B., Dechow, P. M., Sun, Y. and Wang, A. Y. (2013). 'The use of financial ratio models to help investors predict and interpret significant corporate events', *Australian Journal of Management*, Vol. 38 No. 3, pp.553–598. https://doi.org/10.1177/0312896213510714

Messod D. Beneish, (1999). 'The Detection of Earnings Manipulation'. Available at https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.195.3676&rep=rep1&type=pdf Accessed on 21 January 2022.

Nair, A. (2022). 'Explained: Rise and fall of Gujrat's ABG Shipyard, now under probe for fraud'. *The Indian Express*. 17 February. https://indianexpress.com/article/explained/rise-and-fall-of-gujarats-abg-shipyard-now-under-probe-for-fraud-7777288/

Ohri, R. (2022). 'ABG shipyard allegedly used 38 overseas companies to divert funds'. *The Economic Times*. 18 February. https://economictimes.indiatimes.com/industry/transportation/shipping-/-transport/abg-shipyard-allegedly-used-38-overseas-firms-to-divert-funds/articleshow/ 89649530.cms

Owojori, A.A. and Asaolu. T.O. (2009) 'The role of forensic accounting in solving the vexed problem of corporate world', *European journal of scientific research.* Vol. 29 No. 2, pp.183-187. The-role-of-forensic-accounting-in-solving-the-vexed-problem-of-corporate-world.pdf (researchgate.net)

Oyedokun, G. E. (2015) 'Approach to Forensic Accounting and Forensic Audit', *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2575168

Ozili, P.K. (2020) 'Advances and issues in fraud research: a commentary', *Journal of Financial crime.* Vol. 27 No. 1, pp. 92-103. DOI: https://doi.org/10.1108/JF-01-2019-0012

PTI. (2019). 'ABG Shipyard initiates liquidation process under IBC', *Moneycontrol.com,* 6 May. https://www.moneycontrol.com/news/business/abg-shipyard-initiates-liquidation-process-under-ibc-3938251.html

Shirur, S. (2011) 'Tunnelling vs agency effect: A case study of Enron and Satyam', *Vikalpa: The Journal for Decision Makers*, Vol. 36 No. 3, pp. 9–20. https://doi.org/10.1177/0256090920110302

Sidhartha. (2022). 'Auditors may face ban on non-audit work in large cos'. *Times of India, Times Business. New Delhi.* 20 April, p.15.

Suresh, H. (2022). 'ABG Shipyard scam: Employees left in lurch, 2 years of salary dues pending'. *The News Minute*, 7 March. https://www.thenewsminute.com/article/abg-shipyard-bank-scam-employee-left-lurch-3-years-salary-dues-pending-161661

The Economic Times. (2022). 'ABG shipyard auditor had settled fund diversion case with SEBI'. 22 February. https://bfsi.economictimes.indiatimes.com/news/industry/abg-shipyard-auditor-had-settled-fund-diversion-case-with-sebi/89740125

Times of India. (2022). 'Explained: What the SBI, ABG Shipyard Rs. 22,892 crore controversy is all about'. 16 February. https://timesofindia.indiatimes.com/business/india-business/explained-what-the-sbi-abg-shipyard-rs-22892-crore-controversy-is-all-about/articleshow/89607587.cms?utm_source=+contentofinterest&utm_+medium=text&utm_campaign=cppst

Times of India. (2022) 'Insolvency Law tweaks sought to avoid delays'. *Times Business, New Delhi,* 15 April, p.15.

Times of India. (2022, April 15) 'Law may mandate risk mgmt. panels for some cos'. *Times Business. New Delhi,* 15 April, p.15.

Times of India. (2022) 'RBI tightens NBFC lending and disclosure guidelines'. *Times Business. New Delhi.* 20 April, p.15.

Vanasco, R.R. (1998) 'Fraud Auditing', *Managerial Auditing Journal*, Vol. 13 No.1, pp. 4-71. DOI: https://doi.org/10.1108/02686909810198724

Zopounidis, C., Doumpos, M., & Spathis, C. T. (2000) 'Detecting Falsified Financial Statements Using Multicriteria Analysis: The Case of Greece', *SSRN Electronic Journal*. https://doi.org/10.2139/SSRN.250413