



Forensic accounting as a panacea to financial crime in Bangladesh: An empirical investigation

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Abstract

Forensic accounting has become significant in recent years due to the colossal scale of financial fraud and other financial crimes. It is gaining attention not only from corporate sectors but also from economists, policymakers, financial analysts and many others as embezzlement surges in many sectors. The study looks at different factors of forensic accounting as an effective tool for reducing fraud in Bangladesh. A well-designed questionnaire was used to gather primary data. Following the purposive sampling method, 150 responses were collected. Data were analyzed with the use of tables, and statistical regression tools like Chi-square, correlation, and regression. Besides, model diagnostics revealed that all the regressions are free from autocorrelation, and errors are normally distributed. The study reveals that forensic accounting significantly reduces fraud in firms by strengthening internal controls, increasing financial transparency, and enhancing the trustworthiness of financial reporting. These findings are executed under simple regression analysis as the beta ranges between 0.251 and 0.339 under a 1% significance level. Thus, the study concludes that strong internal control systems, reliable financial reporting, and financial transparency can help to reduce financial crime. Therefore, it is suggested that the government of Bangladesh and regulatory bodies should foster the development of forensic accounting through education, training, awareness programmes, and investigations of alleged financial crime cases. This could result in a more robust forensic accounting framework, ultimately reducing financial crime.

Keywords:

Financial reporting credibility
Financial transparency
Forensic accounting
Fraud reduction
Internal control.

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Publisher:

Scientific Publishing Institute

Received: 8 July 2024

Revised: 30 August 2023

Accepted: 13 September 2024

Published: 25 September 2024

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Funding: This research project was funded by the Bangladesh University Grants Commission's Research Grants to Begum Rokeya University, Rangpur, in the Financial Year 2022-2023, under Grant No. UGC/Budget 37.01.0000.052.20.015.20-1682 (30), dated 05/06/2022; and BRUR/R&E/2022-23/25, dated 21/08/2022

Institutional Review Board Statement: The Ethical Committee of the Dept. of Accounting & Information Systems, Begum Rokeya University, Rangpur, Bangladesh has granted approval for this study on (Ref. No. BRUR/AIS/PEC/Arroval Letter/2023/002).

Transparency: The author confirms that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.

1. Introduction

Forensic accounting has gained attention significantly due to the soaring of financial frauds at an alarming rate. In this situation, the demand for forensic accounting is expected to increase, particularly given the recent upsurge of corporate scandals, and failures. To be more precise, they have led companies to employ forensic accountants to investigate and find various forms of malfeasance and, on the other hand, stop it from

happening again. Forensic accounting has become a crucial and strategic tool in combating crime, corruption, and fraud through investigation and resolving fraud and embezzlement claims (Islam, Rahman, & Hossain, 2011).

Traditionally, Accounting is defined as recording, classifying and summarizing an entity's economic events to inform decision-makers. Nevertheless, after considering the current environment, Carnegie, Parker, and Tsahuridu (2021) proposed a new accounting definition. They argued that accounting is a blend of technical, social, and moral practices to promote the sustainable usage of resources and proper accountability as a cornerstone of a prosperous organization, people, and the environment. Identification, documentation, and dissemination of an entity's economic events to interested parties are all components of accounting, which is an information system (Weygandt, Kimmel, & Kieso, 2015). Creditors, lenders, shareholders, customers, and social activists are a few examples of users. Stakeholders seek information to make decisions and need true and fair information about the company. They used to depend on the internal and external auditor to meet their purposes. However, the failure of the auditors opens up the scope of forensic accounting (Rehman & Hashim, 2018).

Forensic accounting is a specialized branch of accounting that amalgamates accounting, auditing, and investigative skills that promise to prevent embezzlement of funds and financial crimes (Adegbe & Fakile, 2012). The demand for forensic accounting abilities has increased significantly over time, both in the public and private sectors, due to the rise and prevalence of fraud and fraudulent activities all over the world, especially in developing nations like Bangladesh. It is impossible to disregard the negative impact of fraudulent practices on Bangladesh's economy. Every logical and reasonable person can easily realise it, from general people to the government to the stakeholders of small businesses to the corporate world. Only strong leadership committed to zero tolerance for corruption can eliminate fraud and fraudulent activities with successful desired outcomes. It is alarming that instances of fraudulent practices have spread and are quickly taking on epidemic proportions, even though the Bangladesh government has established two agencies - Anti-Corruption Commission (ACC) and Bangladesh Financial Intelligence Unit (BFIU) - to combat fraud, fraudulent practices, and corruption in the nation.

To combat the threat of corruption, fraud, and fraudulent practices, government organizations like the ACC and BFIU have fallen short of expectations from Bangladeshis and observers from the international community for several motives. Financial frauds, embezzlements, deceptive business transactions, and other illicit activities occur frequently in the public sector but go unreported, uninvestigated, and unpunished. As a result, a large amount of capital is lost, a small number of people amass wealth at the expense of the majority, and the economy of Bangladesh suffers. Reported cases of the various levels of fraud committed in the local economy are widely reported in the media (Iftekharuzzaman, 2023; Kashem, 2023).

The demand for forensic accounting has become authoritative and highly desirable in guaranteeing the eradication of fraud, corruption, and other illicit practices in the Bangladeshi economy. In order to effectively battle the hideous fraudulent practices in the Bangladesh economy, forensic accounting is a specialized, scientific technique that is thought to be an efficient and effective institutionalized framework. In this regard, Enofe, Okpako, and Atube (2013) pointed out that forensic accounting examines the causes and effects of fraud and technical mistakes committed by people. He examined forensic accounting as a remedy for financial fraud in the Nigerian economy.

Akhidime (2020) narrated that the auditor's assessment that the financial statements were true and fair was sufficient to accord the credibility of the financial statements. This is anticipated to boost the confidence of financial statement users who want to make an investment decision. Modern organized financial crimes have emerged in recent years. Financial offences, including embezzlement, bribery, insolvency, and security fraud, among others, now encroach into the pivot of society and are given priority by governments. It is not advisable to rely exclusively on auditors' opinions, given the rise in financial crime and white-collar crime.

Islam et al. (2011) examined forensic accounting as a medium for fighting financial faults in Bangladesh and the importance of forensic accounting as well as the applicability of this technique in detecting frauds committed in corporate sectors of Bangladesh. Emmanuel, Enyi, and Olajide (2018) observed that forensic accounting is a new dynamic approach to financial integrity. Ile and Odimmega (2018) investigated the usefulness of forensic accountants in detecting fraud in financial statements. Krstić (2009) and Eiya, Otor, and Awili (2013) looked into the use of forensic accountants in identifying financial statement fraud. In order to combat financial corruption in Bangladesh, Ahmed and Ali (2019) looked at the use of forensic accounting techniques in the investigation and identification of embezzlement. The effectiveness of forensic accounting in identifying, investigating, and preventing fraud is examined. Nevertheless, despite the substantial amount of research on this subject, each of them made a few suggestions but could not conclude a concrete outcome. They also mentioned that this field of study is still far from being settled. To the best of the researcher's knowledge, however, there hasn't been enough focus, particularly on empirical evidence on the effectiveness of forensic accounting as a remedy to reduce financial fraud in Bangladeshi firms. Against this backdrop, the main research question is whether forensic accounting can act as a fraud reduction tool in Bangladesh.

In this paper, the researcher briefly reviewed the theoretical background of forensic accounting. Secondly, it focused on the hypothesis development by reviewing the related literature on examining the impact of forensic accounting on fraud reduction and how it does. The research methodology is mentioned in the fourth

section. In the fifth section, results are interpreted and discussed. The recommendation and scope for further study are discussed in the last section of the paper.

2. Literature Review

Forensic accounting is a multi-disciplinary area. It integrates accounting, auditing, and investigative skills to detect and prevent financial fraud. Augustine, Oyebamiji, and Lawal (2020) also mentioned that forensic accounting is a specialized field that combines these three skills to resolve financial discrepancies and fraud. They added that it involves investigative procedures that ensure accounting data's integrity and can provide evidence in court. Thus, a forensic accountant must possess diverse skills, including accounting knowledge, auditing techniques and investigative methods, and an understanding of the legal framework. This multidisciplinary approach enables them to effectively analyse financial information and present findings that meet legal standards. Crain, Hopwood, and Young (2015) stated that forensic accounting involves the application of special skills in accounting, auditing, finance, quantitative methods, research, investigations, and specific areas of law. Forensic accountants are equipped with the necessary abilities and expertise to gather, examine, and assess evidence, as well as to interpret and present their conclusions. Manning (2012) defines forensic accounting as the skill of gathering and presenting financial data in a form that may be used as proof in court against individuals who are accountable for financial breaches. From the prosecutor's point of view, forensic accounting is concerned with obtaining, understanding, assembling, and presenting complex financial data in an understandable, precise and accurate manner.

The rising global economic and financial crises resulting from fraud have shaped a demand for forensic accounting to examine financial books, records, and data (Odelabu, 2014). This process helps in the identification and prosecution of fraud by spanning the gap between conventional accounting and the legal system. Forensic accounting demonstrates value in the fight against financial crime, facilitating the detection and tracking of instances (Clayton, 2012).

Forensic accountants are professionals who identify and address errors in financial statements and accounting records, proactively detecting and preventing fraudulent activities within firms. Khersiat (2018) concluded that forensic accountants have the knowledge, expertise, and credentials to identify fraud in financial statements and detect manipulation of financial figures. By supplying essential proof, identifying a company's fraud risk, creating preventative plans, and guaranteeing regulatory compliance, these experts are crucial to judicial processes. By analyzing financial data, calculating losses, and producing judgments that are agreeable to the court, forensic accountants support asset protection and encourage stakeholder confidence.

Simeon (2018) identified that the phrase "Economic and financial crimes" refers to a wide range of offences, including fraud, active stock market manipulation, and laundering of criminal proceeds. It comprises a wide variety of illicit activities together with money laundering and tax evasion.

Akther and Xu (2020) recognized audit expectation gaps due to various factors, including auditors' accountability for fraud detection, the use of reports, non-audit services, and unfulfilled expectations for further assurance services. As a result, forensic accounting gained attention. After discussing the theoretical and historical context of forensic accounting, Shakir and Thabit (2020) concluded that forensic accounting can be an essential instrument for eradicating company fraud situations. According to Enofe, Idemudia, and Emmanuel (2015), forensic accounting services impact how much fraud occurs in Nigerian businesses. According to Modugu and Anyaduba (2013) stakeholders have broad consensus about the value of forensic accounting in financial reporting, fraud control, and internal control quality. Ozili (2015) reviewed the literature, discussed policy implications for fraud and forensic accounting and suggested many crucial lines of inquiry for forensic accounting research coming forward. Overall, the articles point to the potential value of forensic accounting in identifying and preventing financial misconduct in the industry.

The trend of continual, high-profile financial crimes that have occurred in Bangladesh over the past two decades has called into doubt the capacity of regulators and accounting experts to combat and prevent similar crimes from occurring. Recent financial fraud in Bangladesh which cost a lot to stakeholders are Padma Bank (former Farmers Bank) Scandal in 2022; Evaly, Dhamaka Shopping, the Alisha Mart Scandal in 2021; PK Haldar's Scandal in 2020, National Bank Scam, Janata Bank Loan Scam (Hasan, Alam, & Begum, 2022). These are only a few of the many. These instances cannot be referred to as extraordinary events because they are meticulously planned and supported by various institutional patronages. Instead, they must be viewed as a well-established system of capital accumulation through the theft of public funds.

3. Hypothesis Development

There have been numerous cases when public and private companies have experienced losses due to fraudulent operations. This has led many scholars to conduct empirical studies to determine how effective forensic accounting is in combating fraud.

Internal control and its components play a significant role in controlling fraud in business firms. Forensic accounting is a crucial tool in internal control systems, enhancing accountability and preventing fraud. It helps identify motives behind corrupt practices, such as bribery or unethical behaviour by employees. Due to its nature, forensic accounting can create a positive working environment, dissuading fraudsters and identifying

top-level management's unethical intentions. This approach helps establish communication and synergy throughout the corporation, ensuring a strong internal control system (Ali & Ahmed, 2019). According to Singh and Choudhari (2022), forensic accounting improves the internal control system in businesses. Xanthopoulou, Kalantonis, Arsenos, and Kallandranis (2023) also stated that forensic accounting improves internal control systems, which are effective in fraud defence. Thus, the first null hypothesis is proposed as follows:

H₁: Forensic accounting has no significant impact on the internal control system of firms which ensures financial fraud reduction.

Forensic accounting acts as a proactive measure against financial deception. Krstić (2009) and Bhasin (2007) highlight the role of forensic accounting in enhancing financial statements' credibility, aligning with auditing principles, and supporting corporate governance by integrating accounting, auditing, and investigative skills for fraud investigations, thereby boosting user confidence in auditors' reports. Enofe et al. (2013) highlighted the benefits of forensic accounting in increasing transparency, ensuring investment safety, and eliminating creative accounting that deceives creditors. It also helps disclose an organization's actual profitability and liquidity position, thereby enhancing transparency. Therefore, the second null hypothesis is proposed as follows:

H₂: Forensic accounting has no significant impact on the financial transparency of firms which ensures financial fraud reduction.

Financial reporting credibility is the trust or faith investors have in the accuracy of the financial statements presented by a company. Companies ought to put the most significant emphasis on accurate, timely, and complete financial statements to maintain the credibility of their financial reporting. This can be accomplished by examining management's decisions, actions, and risk areas and ensuring the finance team is involved in all significant business decisions. Forensic accounting can enhance financial transparency in businesses by enhancing fraud risk assessment and task performance, leading to better corporate governance practices. Bhasin (2007) noted that forensic accounting can help detect and investigate fraud in financial statements. Chukwu et al. (2019) identified that basic forensic accounting skills will improve financial reporting credibility. Forensic accountants play a crucial role in fighting financial malpractices and fraud, ensuring courts have sufficient information to use as evidence of criminal activity. Enofe et al. (2013) highlighted that forensic accounting improves financial reporting quality, restores public trust, boosts stakeholder confidence, and reduces the expectations gap by directly investigating fraud. Overall, forensic accounting can improve financial creditability in businesses. Lastly, the third null hypothesis is proposed as follows:

H₃: Forensic accounting has no significant impact on the financial reporting credibility of firms which ensures financial fraud reduction.

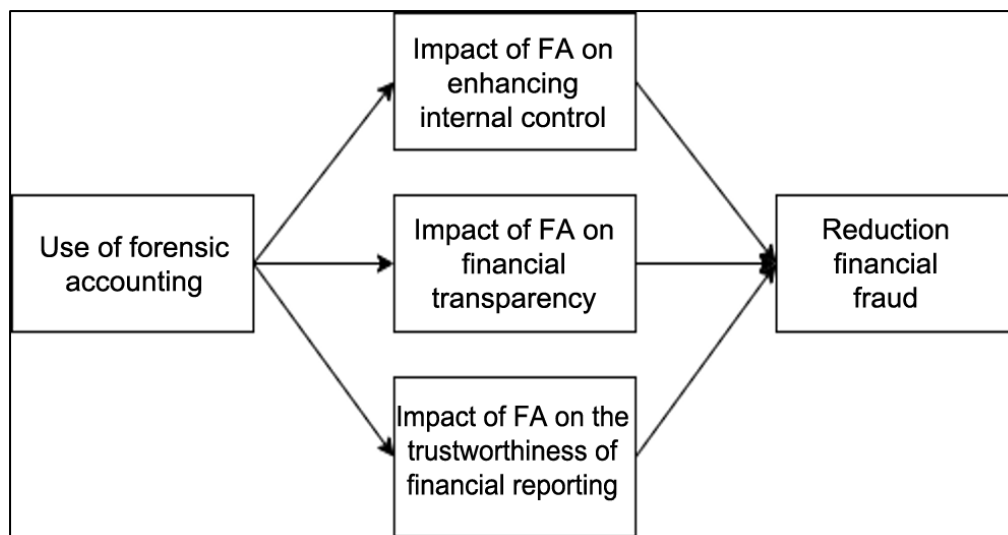


Figure 1. Conceptual framework.

Figure 1 illustrates how forensic accounting impacts financial fraud reduction. Forensic accounting enhances internal control, influences financial transparency, and increases the trustworthiness of financial reporting, which ultimately helps to reduce financial fraud.

4. Research Methodology

This research investigated the impact of forensic accounting on reducing fraud in Bangladeshi companies. The study used survey research design as the primary research instrument through the administration of

questionnaires to accomplish the goal. It will answer the predetermined research questions, and validate the developed hypotheses mentioned in the preceding section. The required number of respondents who are the stakeholders (i.e. auditor, professional accountant) were given the questionnaires. The questionnaire's findings were analyzed with the help of tables, basic percentages, and statistical analysis methods. The Chi-square test was utilized to corroborate the provided hypotheses in their entirety. They are discussed in the results. This study aimed to exhibit a hypothetical test on the effect of forensic accounting on fraud reduction from the concurrent evidence of different companies in Bangladesh. Information was collected from 150 respondents. People who work in the field of accounting are the desired respondents. Four crucial criteria- forensic accounting (FA), internal control system (ICS), financial transparency (FT), and financial report credibility (FRC) were selected under the following recent studies that consist of ten, six, seven, and seven variables, respectively.

5. Results & Discussions

This part analyzes the questionnaire given to and collected from the respondents using mathematical and statistical methods. Recommendations and conclusions are derived from this analysis. The basic information is exhibited in [Appendix A](#). This study collected data from the employees of top listed firms from the Dhaka Stock Exchange (DSE). It's reflected that out of 150 employees, the maximum share is aged under 30 (87%), and 73% are male. Under educational qualification, more than half (88 or 59%) had accomplished their post-graduation. The employment status indicated that 84 (56%) were auditors, and the reminders involved accountancy. For basic statistics, the study also exhibited average, standard deviation, skewness, and kurtosis for observing and detecting outliers in [Appendix B](#).

Several measurement scales were followed to incorporate the study. Firstly, forensic accounting (FA) is counted by collecting information on ten variables of relevant studies [Rehman and Hashim \(2018\)](#). Similarly, forensic accounting and financial transparency ([Enofe et al., 2013](#)), forensic accounting and financial reporting credibility ([Modugu & Anyaduba, 2013](#)) and forensic accounting and internal control ([Fasua, Amodu, & Adeniran, 2023](#)) were considered in this study.

Forensic accounting (FA) deals with 10 variables, of which the minimum average comes to 3.27 (FA05: My company could be threatened by fraud because of a lack of ethical values) while the maximum comes to 3.55 (FA04: My company could be threatened by fraud because of poor internal control). Moreover, the standard deviation ranges from 1.134 to 1.294. Skewness and kurtosis are also shown to check normality. As both are within threshold -2.0 to + 2.0, the variables are assumed to be normally distributed. In addition, the mean values for financial transparency (FT), internal control system (ICS), and financial reporting credibility (FRC) vary from 3.32 to 3.73, 3.40 to 3.65, and 3.33 to 3.65, respectively. More information is shown in [Appendix B](#).

Table 1. Frequency distribution of forensic accounting (FA) in Bangladesh.

Variables	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
FA01	10 (19.2)	37 (57.6)	30 (75.2)	37 (74.6)	36 (73.4)
FA02	9 (19.2)	23 (57.6)	49 (75.2)	35 (74.6)	34 (73.4)
FA03	4 (19.2)	27 (57.6)	45 (75.2)	36 (74.6)	38 (73.4)
FA04	7 (19.2)	23 (57.6)	41 (75.2)	38 (74.6)	41 (73.4)
FA05	12 (19.2)	32 (57.6)	41 (75.2)	34 (74.6)	31 (73.4)
FA06	10 (19.2)	26 (57.6)	37 (75.2)	37 (74.6)	40 (73.4)
FA07	9 (19.2)	31 (57.6)	33 (75.2)	39 (74.6)	38 (73.4)
FA08	13 (19.2)	25 (57.6)	29 (75.2)	41 (74.6)	42 (73.4)
FA09	14 (19.2)	32 (57.6)	36 (75.2)	35 (74.6)	33 (73.4)
FA10	8 (19.2)	32 (57.6)	35 (75.2)	41 (74.6)	34 (73.4)
Total	96	288	376	373	367

To address the overall response of forensic accounting (FA) of Bangladesh, the frequency distribution is exhibited in [Table 1](#), and the proportion of agree as well as strongly agree is higher on each variable, indicating that the respondent directly agreed with the asking statements. Under agree as well as strongly agree with the perception, the minimum was observed as 65 for FA05 (i.e. My company could be threatened by fraud because of a lack of ethical values), and the maximum was observed as 83 for FA08 (My company could be threatened by fraud because of management override of the control) respectively.

This study postulated several hypotheses. Firstly, to address the first hypothesis, "forensic accounting has no significant impact on the internal control system of firms which ensures financial fraud reduction", six statements were addressed, and the proportion of agree as well as strongly agree is higher on each variable regarding that respondent directly agreed with the asking statements (result shown on [Table 2](#)). Under agree as well as strongly agree with the statement, the minimum was observed as 84 for ICS02 (i.e. Monitoring and evaluation of internal control systems can be done effectively by using forensic accounting), and the maximum was observed as 101 for ICS01 (Forensic accounting can help the accountants to develop the existing internal

control systems which ultimately reduce the chances of fraud) respectively. To conclude, the Chi-square test was observed, and the calculated test statistic was found to be 43.79 on 20 d.f., while the tabulated test statistic was 37.56, respectively, on a 1% level of significance. Hence, the calculated value exceeded the tabulated value and thus, the null hypothesis was rejected. In fine, forensic accounting has a significant effect on improving the internal control system of firms in Bangladesh.

Table 2. Frequency distribution of the internal control system (ICS) of Bangladesh.

Variables	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
ICS01	9 (11.4)	13 (28.4)	27 (33.2)	63 (69.2)	38 (37.8)
ICS02	10 (11.4)	28 (28.4)	28 (33.2)	60 (69.2)	24 (37.8)
ICS03	9 (11.4)	24 (28.4)	27 (33.2)	52 (69.2)	38 (37.8)
ICS04	9 (11.4)	26 (28.4)	30 (33.2)	61 (69.2)	24 (37.8)
ICS05	12 (11.4)	22 (28.4)	26 (33.2)	57 (69.2)	33 (37.8)
ICS06	8 (11.4)	29 (28.4)	28 (33.2)	53 (69.2)	32 (37.8)
Total	57	142	166	346	189

Secondly, to attempt with the second hypothesis of “forensic accounting has no significant impact on the financial transparency of firms which ensures financial fraud reduction, seven variables were introduced (result shown in Table 3)”. Out of these seven variables, the proportion of strongly agree or agree came lowest, 81 (FT07: Forensic accounting can recognize misused resources and distinguish reversible transactions), while the highest was 98 (FT01: Forensic accounting can enhance transparency in organizational activities). For more scrutiny, the traditional Chi-square test was executed, and under 24 d.f., the calculated test statistic was 209.55, and the tabulated test statistic was 42.97, respectively, on a 1% level of significance. Hence, the null hypothesis is rejected, and thus there is a significant effect of forensic accounting on firms’ financial transparency in Bangladesh.

Table 3. Frequency distribution of financial transparency (FT) in Bangladesh.

Variables	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
FT01	7 (14.4)	18 (33)	27 (41.4)	66 (78.4)	32 (47.4)
FT02	9 (14.4)	24 (33)	32 (41.4)	54 (78.4)	31 (47.4)
FT03	11 (14.4)	27 (33)	22 (41.4)	48 (78.4)	42 (47.4)
FT04	9 (14.4)	24 (33)	33 (41.4)	55 (78.4)	29 (47.4)
FT05	16 (14.4)	19 (33)	31 (41.4)	54 (78.4)	30 (47.4)
FT06	8 (14.4)	23 (33)	35 (41.4)	57 (78.4)	27 (47.4)
FT07	12 (14.4)	30 (33)	27 (41.4)	58 (78.4)	23 (47.4)
Total	72	165	207	392	214

Thirdly and finally, the last hypothesis was that forensic accounting (FA) has no significant impact on the financial reporting credibility (FRC) of firms, which ensures financial fraud reduction, and for this, seven variables are inserted (the result is tabulated in Table 4). Out of these seven variables, three variables represent more than 60% positivity, while only one exhibited just 50%. For the most significant positive responses, 99 (FRC02: Forensic accounting can meet the increasing demand for investigative and interpretive auditing skills) respondents strongly agree or somehow agree with two statements respectively. On the other side, half of the respondents agreed with the statement, “Forensic accounting can meet the increasing demand for investigative and interpretive auditing skills”. For more statistical analysis, the customary Chi-square test was examined, and the calculated test statistic was observed as 58.83 on 24 d.f., whereas, the tabulated statistic was observed as 42.97 on a 1% level of significance. So, the null hypothesis was rejected again and there is a significant effect of forensic accounting on the financial reporting credibility of firms in Bangladesh.

Table 4. Frequency distribution of financial reporting credibility (FRC) in Bangladesh.

Variables	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
FRC01	9 (11.8)	23 (32.2)	28 (42.8)	67 (82)	23 (41.2)
FRC02	10 (11.8)	24 (32.2)	17 (42.8)	61 (82)	38 (41.2)
FRC03	8 (11.8)	14 (32.2)	30 (42.8)	57 (82)	41 (41.2)
FRC04	9 (11.8)	26 (32.2)	40 (42.8)	58 (82)	17 (41.2)
FRC05	5 (11.8)	31 (32.2)	28 (42.8)	56 (82)	30 (41.2)
FRC06	8 (11.8)	24 (32.2)	40 (42.8)	50 (82)	28 (41.2)
FRC07	10 (11.8)	19 (32.2)	31 (42.8)	61 (82)	29 (41.2)
Total	59	161	214	410	206

The study aims to exhibit the role of forensic accounting in fraud reduction in the context of Bangladeshi firms. To exhibit this, three pillars - internal control system (ICS), financial transparency (FT), and financial

report credibility (FRC)- were executed as null hypotheses based on statistical analysis, and none of them were accepted. So, forensic accounting needed dire acceptance, including these three bases as their essence, presence, and practices among workers or accountants are important. To do more statistical analysis, this study converted these variables into indices to exhibit correlation and regression in a single variable.

5.1. Bivariate and Multivariate Analysis

This study also examined bivariate analysis and multivariate analysis to address the impact of hypotheses. For bivariate analysis, correlation analysis under Pearson product-moment correlation was examined (Table 5). Here, forensic accounting (FA) is the fixed regressor, whereas the rest of the three variables, internal control system (ICS), financial transparency (FT), and financial reporting credibility (FRC), are response variables. Under the null hypothesis of no association of forensic accounting with others, all are rejected as the correlation coefficient is significant on a 1% significance level. For more clarification, the correlation between forensic accounting (FA) and internal control system (ICS) comes to 0.339, resulting in a 33.9% association with a strong statistical indication. Similarly, the relationship between internal control system (ICS) and financial reporting credibility comes to 0.5, meaning that there is a 50 percent association between these two variables.

Table 5. Correlation matrix of variables.

Variables	FA	ICS	FT	FRC
FA	1			
ICS	0.339**	1		
FT	0.251**	0.398**	1	
FRC	0.308**	0.504**	0.5**	1

Note: ** denotes 1% level of significance on a 2-tailed distribution.

For more explanation, multiple regression analysis is executed (Table 6). This study addressed simple regression for the individual basis of forensic accounting (FA) as a fixed regressor, and the rest are dependent variables. In the first regression, the internal control system (ICS) as an outcome variable, the beta coefficient comes to 0.339, saying that for one unit increase in forensic accounting, the internal control system (ICS) will increase by 0.339 unit on a 1% level of significance. On the other hand, in the second model, financial transparency (FT) is considered as a dependent variable, of which beta comes to 0.251; in the third model, financial reporting credibility (FRC) is the dependent variable, where beta comes to 0.308. In all three models, the F-statistic becomes significant, resulting in the regression model explaining well.

Moreover, the R-square on these models ranges from 0.063 (Model 02) to 0.115 (Model 01). Besides, the normality of residuals is examined, and errors are found to be normally distributed. For checking autocorrelation, Durbin-Watson comes low, which concludes that models are free from autocorrelation. Hence, our three proposed null hypotheses (H01, H02, and H03) were rejected on a 1% level of significance. In other words, the sole impact of forensic accounting on internal control system (ICS), financial transparency (FT), and financial reporting credibility (FRC) comes positively significant under the statistical paradigm.

Table 6. Model estimates of the regression model.

Variables	Model-01	Model-02	Model-03
Constant	12.192* (2.06)	17.142* (2.329)	15.471* (2.352)
FA	0.339* (0.06)	0.251* (0.067)	0.308* (0.068)
Model diagnostics			
F-statistic (d.f.)	19.223* (1,148)	9.961* (1,148)	15.487* (1,148)
R ²	0.115	0.063	0.095
R _{adj} ²	0.109	0.057	0.089
Durbin-Watson statistic	1.554	1.5332	1.5

Note: * denotes a 1% significance level on a 2-tailed distribution, and the standard error is given between the parentheses.

6. Conclusion

Forensic accounting is in its inception state in Bangladesh. This study focuses on the effect of forensic accounting on combating fraud in companies in Bangladesh. This study performed simple regression analysis as forensic accounting as a fixed regressor, and the rest were response variables. According to the findings, forensic accounting has a significant impact on improving the internal control systems of firms, leading to a reduction in fraudulent activities (Model 01: $\beta=0.339$, p-value: <0.01). This is accomplished through developing, monitoring, and evaluating internal control systems since they can spot possible trouble spots and set up efficient risk assessment procedures. Furthermore, forensic accounting increases financial transparency (Model 02: $\beta=0.251$, p-value: <0.01) and enhances the credibility of financial reporting (Model 03: $\beta=0.308$, p-value: <0.01) within firms in Bangladesh. Forensic accounting can identify questionable transactions, lower the incidence of fraud, or track down any monies or assets that have been misappropriated, and help to ensure

compliance with laws and regulations and support the litigation process, if necessary. These are ensured by rejecting three null hypotheses on the presence of regression analysis and chi-square distribution for the measure of independence, and the result can be that forensic accounting can be an important tool for financial fraud reduction in Bangladesh. Thus, forensic accounting should be recognized and introduced as an effective tool in companies. Furthermore, it must be incorporated into the tertiary-level educational curriculum to produce skilled human resources to mitigate the knowledge gap. In addition, workshops, seminars, and symposiums could be organized at government and institutional levels to spread awareness. Thus, personnel working in the accounting area in the corporate sector will be more familiar with this issue. Last but not least, the government should take the necessary steps to promote forensic accounting by providing adequate training and resources to forensic accountants so that they become experts in the field of forensic accounting. All government ministries and agencies should establish forensic accounting units to help strengthen internal controls and ensure thorough investigation in order to prevent, deter, and detect financial crime in Bangladesh. This work has various limitations due to a lack of knowledge and sufficient research on this related subject in Bangladesh. The lack of a suitable framework is a major drawback in implementing forensic accounting for combating fraud which is highlighted by Akinbowale, Klingelhöfer, and Zerihun (2020). Moreover, recommendations suggested in light of the study may differ from region to region and country to country. Bangladesh has to conduct further research on this issue. Further study may focus on the working environment and advancement of accountants who professionally and personally use forensic accounting. A suitable framework for implanting for forensic accounting should be considered highly for future study.

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Appendices

Appendix A: Demographic, educational, and occupational profile of respondents.

Variables	Label	Frequency	%
Age	21-30	130	87%
	31-40	14	9%
	41 and above	6	4%
Sex	Male	110	73%
	Female	40	27%
Education	Graduation	40	27%
	Post- Graduation	88	59%
	Professional Degree	22	14%
Occupation	Auditor	84	56%
	Accountant	66	44%

Appendix B: Basic statistics (mean, standard deviation, skewness, and kurtosis) of forensic accounting (FA), internal control system (ICS), financial transparency (FT), and financial reporting credibility (FRC) of Bangladesh.

Name	Label	Mean	SD	Kurtosis	Skewness
FA01	My company’s internal auditors should use FA in their attempt to uncover fraud	3.35	1.269	-0.159	-1.173
FA02	My company could be threatened by fraud because of poor fraud management	3.41	1.171	-0.220	-0.766
FA03	My company could be threatened by fraud because of poor fraud assessment	3.51	1.134	-0.160	-0.980
FA04	My company could be threatened by fraud because of poor internal control	3.55	1.179	-0.341	-0.832
FA05	My company could be threatened by fraud because of a lack of ethical values	3.27	1.235	-0.111	-0.993
FA06	My company could be threatened by fraud because of inadequate background checks on employees	3.47	1.241	-0.323	-0.943

Name	Label	Mean	SD	Kurtosis	Skewness
FA07	My company could be threatened by fraud because of inadequate background checks on prospective vendors	3.44	1.240	-0.268	-1.042
FA08	My company could be threatened by fraud because of management override of the control	3.49	1.294	-0.437	-0.949
FA09	The requirement of the FA in my company is inevitable because of the inability of statutory auditing to identify, expose, and prevent weaknesses in flawed internal controls	3.27	1.279	-0.156	-1.074
FA10	The requirement of the FA in my company is inevitable because of the inability of statutory auditing to identify, expose, and prevent weaknesses in fraudulent financial statements	3.41	1.205	-0.221	-1.008
ICS01	FA can help accountants develop existing internal control systems, ultimately reducing fraud's chances.	3.72	1.118	0.141	-0.858
ICS02	Monitoring and evaluation of internal control systems can be done effectively by using FA.	3.40	1.159	-0.715	-0.462
ICS03	Internal control systems established by forensic accountants help to identify signs of danger.	3.57	1.200	-0.693	-0.541
ICS04	Risk assessment processes under FA specifically cover the risk of fraud and identify red flag areas.	3.43	1.132	-0.603	-0.494
ICS05	FA can help in setting up a clear framework to detect and deter fraud.	3.51	1.214	-0.612	-0.591
ICS06	FA ensures internal checks and appropriate fraud preventive measures.	3.48	1.180	-0.834	-0.411
FT01	FA can enhance transparency in organizational activities.	3.65	1.087	-0.093	-0.735
FT02	FA can help to reflect the organization's true financial position.	3.49	1.163	-0.645	-0.477
FT03	FA makes financial data more reliable.	3.55	1.272	-0.892	-0.518
FT04	FA can eliminate creative accounting that is deceptive to stakeholders.	3.47	1.151	-0.62	-0.469
FT05	FA promotes accountability within the organization.	3.42	1.244	-0.668	-0.546
FT06	FA recognizes suspicious transactions and diminishes events of misappropriation.	3.48	1.116	-0.521	-0.478
FT07	FA can recognize misused resources and distinguish reversible transactions.	3.33	1.191	-0.839	-0.406
FRC01	FA is a meaningful approach to improving the quality of financial reporting.	3.48	1.110	-0.388	-0.621
FRC02	FA can enhance stakeholder trust in corporate financial reporting.	3.62	1.213	-0.553	-0.696
FRC03	FA can meet the increasing demand for investigative and interpretive auditing skills.	3.73	1.123	-0.057	-0.769
FRC04	FA directly deals with fraudulent activities, minimising the financial reporting expectation gap.	3.32	1.076	-0.522	-0.407
FRC05	FA is important for creating and maintaining a culture of honesty and integrity in the organization.	3.50	1.128	-0.861	-0.37
FRC06	FA ensures compliance with laws and regulations in the organization.	3.44	1.126	-0.633	-0.363
FRC07	FA helps prepare reports that can be used for litigation purposes.	3.53	1.139	-0.337	-0.636