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Reestablishing Legitimacy After Corporate Frauds: The Role of Governance Structure in Restoring Financial Credibility in Emerging Economies

Bassam Al fartizi ^a , Friedman Al Hasham ^b , Ibrahim Wahab ^c

^a Department of Accounting, Administration & Economics. Al-Muthanna University, Iraq
^b Department of Accounting, Administration & Economics. Al-Muthanna University, Iraq
^c Department of Economics and Management, Ferdowsi University, Mashhad 9177948974, Iran

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Correspondence to Author;
 Bassam Al

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ABSTRACT



Purpose: his research aims to explore the relationship between changes in corporate governance structures and the financial recovery of firms following corporate fraud in emerging markets. The main focus of the research is to understand how governance changes can affect the financial credibility recovery of firms affected by fraud, with a case study of Iraq as an emerging market country.

Method: This study uses a quantitative approach with data collected from non-financial companies listed on the Baghdad Stock Exchange. The Baneish M-score model was used to identify companies involved in fraud. A number of statistical methods were used to analyse governance changes and the financial performance of companies.

Findings: This study found that firms involved in fraud tended to have weak governance before the fraud was uncovered. However, after the fraud, most firms made significant changes to their governance structure. This led to improved financial recovery of the firms, particularly in terms of financial reporting transparency and increased investor confidence, which in turn improved their market performance.

Novelty: This research provides a novel contribution to the understanding of the importance of corporate governance reforms in the recovery process after corporate fraud, particularly in emerging markets such as Iraq. It presents country-specific governance dynamics and provides insights into effective recovery strategies.

Implications: The findings of this study provide important insights for policymakers, regulators and business leaders in emerging markets. The research highlights the importance of improved governance and transparency in financial reporting to mitigate the negative impact of corporate fraud and to increase market confidence, which in turn will support the recovery and financial stability of companies involved in fraud.

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1. Introduction



Corporate fraud is one of the most serious corporate and management problems in the last decades especially in emerging economies like Iraq. With the evolution of the global business landscape becoming more complex, the integrity of financial reporting has come under increasing scrutiny (Gatti et al., 2019; Kouznetsov et al., 2019; Seele, 2016). This type of fraud can lead to loss of investor trust and companies can take a long time to recover from the losses they incur due to such types of fraud. Recent research shows that acts of fraud, such as accounting manipulation, false financial statements, and governance failures, can significantly tarnish a firm's reputation and potentially result in dire legal and financial consequences (Comer, 2018; Leung & Park, 2020; Reilly et al., 2020). Indeed, one of the most significant aspects in restoring legitimacy has been the role of governance structures in the recovery process. Emerging economies may not have the same level of stringency in their financial systems, market regulations, and governance mechanisms, highlighting the compelling need to restore their credibility through appropriate governance mechanisms (Anagnostopoulos, 2018; Ma et al., 2021; Tan & Zhu, 2022). The potential for governance restructuring in the aftermath of fraud highlights the role it plays in encouraging market stability and restoring confidence in investors. Governance changes like the implementation of independent members on boards of directors and disclosures of financial information have become critical strategies for companies seeking to restore confidence in the market (Balan, 2022; Alahmadi, 2020). This is particularly true in Iraq where teams are trying to restore from fraud scandals and new pressures with a more globalized financial market.

While governance reforms have been increasingly recognized as crucial components

of post-fraud recovery, there are a number of unanswered questions. A key question is whether restructuring governance can improve financial credibility. Some research highlights the role of fundamental changes to governance such as boards and transparency improvements in rebuilding trust and delivering strong improvements in financial performance, while others demonstrate that these mechanisms are too simplistic (Freddi et al., 2021; Hanisch et al., 2023; Shahab et al., 2022). In emerging markets such as Iraq, however, the challenge is compounded by the absence of strong regulatory frameworks which may limit the implementation of governance reforms in their entirety. There is also a timing and nature aspect to governance change whether firms engage in comprehensive restructuring or make minimal changes has been found to have a significant effect on their financial recovery (Li et al., 2023; Zou et al., 2023). Additionally, stock markets in these areas are notoriously volatile, with fluctuations due to external factors, such as political instability, hindering the viability of investor sentiment, thereby challenging the isolation of governance reform effects on financial performance (Hsu et al., 2023; Larch et al., 2021; Lartey et al., 2022). This gap highlights the need for this study to examine the role of governance structures in influencing the financial recovery of firms post-corporate fraud in developing economies.

This research is mainly based on the Agency Theory and Resource Dependence Theory. Briefly to mention; Agency Theory insists the split of ownership and control gives rise to agency problems making fraudulent behaviors occur, where the manager acts in his own interest over the needs of the shareholders (Jensen & Meckling, 1976). Such theory might be highly pertinent to the dynamics of corporate fraud as well as the role of governance reforms

in counteracting them. Additionally, Resource Dependence Theory explains that organizations depend on external entities to remain legitimate and achieve successful operations (Pfeffer & Salancik, 1978). I am talking about that there are governance reforms that take root internally to manage to help us to achieve this feedback from the global stakeholders. For example, in a corporate fraud recovery setting, the introduction of governance measures such as stronger board oversight, the substitution of independent directors, and increased transparency in financial information can enable firms to return to the capital market exchanges, restoring their financial reputation (Fama & Jensen, 1983). This theoretical foundation is used to investigate how changes in governance structure relate to financial performance in the aftermath of corporate fraud, especially in an emerging market like Iraq, which is known for its high levels of corruption.

The cost of fraud is very high, both economically as well as reputationally now this highlights the need of dealing with corporate fraud and re structuring of governance of these corporates in such emerging economies. Although past studies have examined the impact of governance reforms on financial performance specifically, findings are mixed, warranting additional study. On the other hand, research like that of Singh & Malik (2020) suggests that more effective governance outcomes, such as board independence and audit committees, are associated with significantly greater financial return. Conversely, other research (Li & Li, 2021) indicates that recovery is gradual and difficult, especially in areas with weak institutional frameworks. In contrast, few studies have been conducted on selected emerging economies, where governance reforms can be more challenging to implement and monitor. Moreover, this study seeks to fill the gap

between theory and practice, and look specifically at the effectiveness of governance reforms in the context of Iraq. The variance between studies such as the fecund results laid out in Chen et al. (2024) against the negative outcomes observed by Ahmed & Moorthy (2022) highlight the need for additional empirical assessment to help resolve these differences. The issues under consideration in this study will result in a complete understanding of the role of governance structures in regaining a lost financial credibility after corporate fraud in emerging economies.

The study intends to investigate how changes in governance structure can help in reclaiming financial credibility to companies with a history of corporate fraud. In this context, the specific goals is to analyze the link between governance reforms and the economic rejuvenation of these fraudulent companies, how independent board members and transparency changes contribute towards improving investor confidence and how these governance changes affect stock market performance. In summary, the intended outcome of this research is to impart actionable insight into best practices that policymakers, corporate leaders, and investors can apply in Iraq and broader emerging market contexts to strengthen corporate governance and financial performance post-fraud.

2. Critical Review

2.1 Governance structures and financial credibility of fraudulent companies

The need for governance mechanisms is critical for providing the integrity in the corporates and their absence and inadequacy leads to the fraudulent activities. Most of these firms have weak corporate governance structures prior to the fraud being discovered. Companies with weak governance are more likely to commit fraud because there is no accountability. The studies mentioned above include

research conducted by Khan et al. (2020) and Zain et al. (2022) find that firms that are victims of fraud show evidence of weaker controls around financial reporting, less independent oversight, and poorer risk management processes in place before the fraudulent event occurs. When there are no independent directors, weak audit committees and ineffective internal audits, an environment is created where fraud can thrive (Yilmaz & Dönmez, 2021). In emerging markets, where the corporate governance framework is less developed, this issue is further perpetuated by a lack of a robust regulatory environment (Amin et al., 2019). In Iraq, for instance, it has been discovered that companies with weak governance structures have had a greater prevalence of financial misreporting, depicting their inadequacy to preemptively avoid and discover fraudulent conduct (Al-Tamimi & Al-Ali, 2020). Thus, tackling governance weaknesses is an important first step in preventing corporate fraud and ensuring the credibility of financial reports.

After detection of corporate fraud, companies are often forced to make major reforms in the governance structure of the firm when "rebounding" from fraud. The hope is that these measures will help to rebuild investor trust and facilitate a more transparent and accountable company. Companies found to have been involved in fraudulent practices are proposed to undergo governance reforms (Chen et al., 2021; Sharma & Parikh, 2023) in terms of appointing independent directors, changing board structures, and strengthening internal control mechanisms. Such changes are touted as sending a signal to the market that the company is serious about enhancing its governance and preventing such fraud from occurring in the future. A study contributed by Liu & Lu (2020) showed that firms which had previous fraudulent financial reports tend to appoint significantly more independence of directors on the board, and improved audit procedures after the fraud had been detected. These changes are designed to increase board oversight and to make sure that the company's operations are being monitored more closely. Revamping governance is crucial in re-establishing financial credibility and restoring investor confidence in

emerging economies like Iraq with weak regulatory frameworks (Moustafa & Houry, 2022). Moreover, as pointed out by Tang et al. (2023), companies that do not undergo meaningful governance changes post fraud detection place their investor confidence at risk and the organization remains in more continuous instability.

After investigating a fraud, changes in governance are directly related to firms' financial performances, especially in the stock market. Research shows that after fraud is detected, companies that adopt stronger governance reforms (e.g., greater board independence, transparent financial disclosure, and enhanced internal control systems) perform better in the stock market (Ghosh & Saha, 2021). In a study by Ho et al. (2020) Find significant improvements in stock prices and financial stability for firms that seemed to improve their governance structures after the fraud, and that investors perceive these improvements as signals of reduced risk and improved corporate governance. In addition, financial reporting transparency is the second significant characteristic that has an important impact on market perceptions and investors option to invest in firms with clear and reliable financial statements. According to Alim & Ghosh (2022), a distinction can be made in the recoveries of firms that adopt substantial changes in their structure versus those that adopt a less significant approach to restructuring and governance, with the latter group not performing as well in terms of capital generation and investor faith. Thus, the degree and effectiveness of the alterations of governance are major factors affecting financial recovery in fraudulent companies, particularly in unstable markets such as Iraq.

- H1: Fraudulent firms have a poor governance mechanism in the year before the fraud.
- H2: Firms are more likely to change their governance structures after fraud is detected.
- H3: The change in governance structure has a significant impact on the financial performance of fraud firms in the stock market.

2.2 Impact of governance changes on firm recovery

Financial recovery velocity and success depend heavily on the governance reforms a company implements as a response to the fraud. Studies have shown that companies adopting stricter governance frameworks, like stricter financial reporting, stronger director independence and better risk management practices enjoy a stronger recovery in their finances. Specifically, a study by Rani & Sharma (2021) which focused on actions that lead to specific improvements in governance after a fraud has taken place, such as appointing independent audit committees or increasing oversight from the board, has led to stronger stock market recovery and sustainable performance among firms. On the other hand, companies that enacted only low-effort governance reforms experienced longer windows of insolvency, as investors continued to doubt the firm's capacity to deter against future fraudulent behavior (Wang et al., 2022). Especially in countries like Iraq, where standards of corporate governance may be less established, the act of establishing strong governance reforms is even more vital in order to restore investor confidence and obtain long-lasting financial health (Al-Marzooq, 2023). Thus, the degree of governance reforms determines the path of a firm's financial recovery after falling into fraud.

The effects of appointing independent directors in response to fraud detection have been found to have a positive impact on each of them. Independent directors are seen as a defense against managerial corruption, and an independent board conveys to the capital market the firm is serious about governance and accountability. Studies by Xu et al. (2021) and Li & Zhang (2023) show that the stock price volatility of firms that increase independent board nomination after detected fraud improves due to market anticipation of governance improvement and investor sentiment. And while volatility can suggest heightened uncertainty, it also represents the market's reaction to the company's attempts to regain financial credibility. The presence of

independent directors in Iraq, where market regulations are not stringent, is vital to facilitate information flows and bring relevant changes in governance to help prepare the company for future recovery (Khan et al., 2020). But rising stock price volatility also reflects a censure of ego as stock market investors watch the success of the corporate governance changes at the companies in preventing future frauds.

As a result, there is a divergence in the trajectory of firms, whereby emerging market firms that have undergone corporate fraud followed by major governance restructuring have a much shorter time to return to being credible from an accounting standpoint than do their developed market peers. This is likely due to boost of higher market immaturity and relative low level of institutions in emerging economies supporting the introduction of changes in governance that can quickly translate into financial recovery for firms. The carrying out inventory or mass removal of toners in accordance to the research studies led by KPMG (2022) and Zhou et al. (2021), signalling a commitment to corporate governance reforms in order to recover investor trust is often more desirable for emerging market firms. Developed market firms already have governance structures in place, giving governance improvements less potential to catalyse financial recovery. As an instance, companies in the post fraud companies have become stronger in governance reforms (board of directorship performance and transparency) and have also recovered the performance of the stock market and investor confidence faster in Iraq (Al-Tamimi & Al-Ali, 2020). The expectations of improvement are much higher in emerging markets as well as the greater potential for substantial change so governance reforms in emerging markets can be much more impactful (Chang & Chuang, 2011).

Restoring market confidence post corporate fraud episode significantly hinges on the financial reporting transparency. By improving the quality and reliability of their financial statements, firms send a signal to investors that they are committed to greater accountability and reduced risk. Research by Fung et al. (2022) and Kannan & Sundaram (2023) show that

organizations that increase transparency through enhanced financial disclosures, third-party audits, and adherence to international accounting standards see improvements in stock performance and governance perception. However, the degrees of financial reporting in Iraq is inconsistent; enhancing the degree of reporting transparency can have a considerable influence on investors' faith, and it facilitates firms to recover more quickly from the financial losses arising from the stream of fraud (Moustafa & Khoury, 2022). Moreover, transparent reporting not only enables investor confidence but ultimately prevents future fraud by reducing financial manipulation and encouraging more effective oversight.

H4. Firms that implement more stringent governance reforms post-fraud have stronger financial recoveries than those that make minimal changes.

H5. The presence of independent board members after fraud detection improves investor confidence and leads to an increase in stock price volatility.

H6. Firms with a history of corporate fraud and significant governance restructuring show a faster return to financial credibility in emerging markets compared to firms in developed markets.

H7. Higher levels of financial reporting transparency after fraud detection will improve market perceptions of governance effectiveness and enhance stock performance.

3. Method Innovation

This section presents the study design and methodology, including sampling and data collection, variables operationalization, and data analysis techniques used. Examining the impact of Corporate Governance structural changes effects on financial recovery after corporate fraud is the main aim of this research, especially in the context of Emerging Economies such as Iraq.

3.1 Sampling and collection of the data

There is 186 non-financial companies listed on the Baghdad Iraq Stock Exchange. These companies are based on their involvement in corporate fraud, which is determined through the Beneish M-Score

and is the defining metric for the presence of financial manipulation. The analysis covers a period of 5 years, beginning 2018 and concluding in 2023, involving the collection of publicly available data pertaining to financial documentation, corporate governance announcements, and other company annual reports. In addition, interviews were held with key governance officers of these firms to further clarify the changes that occurred in the governance structure upon discovery of fraud. Previous research has indicated that fraud is often industry specific (Dechow et al., 2011; Fitri et al., 2019), therefore the analysis here further squeezes the sample by industry to ensure firm comparisons are valid. By clustering on the industry, the research can get a better sense of the way governance change varies by sector in response to corporate fraud, as changes in governance mechanism may be quite different within certain industries.

3.2 Operationalization of Variables

Data on financial recovery were also operationalized in this study to assess the impact of governance changes following corporate fraud. These variables are:

The operationalized variables in this regard showed various governance alterations undertaken following fraudulence to investigate the financial turnaround after such corporate debaucheries. Key Variable: Corporate Fraud (CF) (dummy, 1 = fraud detected / 0 = not detected), with detection using the Beneish M-Score model. Specifically, the model characterizes firms as fraudulent (1) or non-fraudulent (0) based on an evaluation of firms' financial statements (Beneish, 1999). The Governance Structure Changes (GSC) reflect the degree of governance changes made post-fraud detection, including number of independent directors appointed, audit committee composition, and board restructuring, as obtained from corporate governance reports (Klein, 2002). The Financial Performance (FP) independent variable is a combination of stock price performance, return on equity (ROE) and market capitalization before the fraud and after the fraud, obtained through market reports and financial statements (Dechow et al., 1995) Investor Confidence (IC) - The relative

volatility in stock price and trading volume after the detection of the fraud indicates the level of market trust and investor sentiment, (Karpoff et al., 1999). Finally, Transparency of Financial Reporting (TFR) refers to the level of detail and correctness of the financial information made available to the public after the detected fraud, emphasizing on the qualitative characteristics of financial statements according to the theoretical context of annual reports and audit analysis to assess the efforts undertaken by the firm to comply with accounting transparency principles (Healy & Palepu, 2001). These variables are essential for examining the dynamics of recovery as well as the effectiveness of governance mechanisms in achieving the restoration of financial performance and investor confidence post-fraud.

3.3 Data analysis techniques

Smart PLS (Partial Least Squares) is a robust statistical method commonly used to model relationships among variables, particularly if they are not normal, and when multiple indicators are available (Hair et al., 2017). Because Smart PLS can estimate the measurement model (which is used to validate constructs) and the structural model (which is used to test hypotheses), it is appropriate for the purpose of this research. The analysis process followed the model specification step, which defines the theoretical framework based on the hypotheses outlined, concentrating on the relationships between corporate fraud, governance change, financial performance, and investor confidence, with governance transparency as a possible mediator (Hair et al., 2014). The constructs' reliability and validity were confirmed using average variance extracted (AVE) and composite reliability (CR) indices, whose threshold values were respectively 0.5 and 0.7, to confirm convergent validity (Fornell & Larcker, 1981). Fornell-Larcker Criterion & Cross Loadings were used to evaluate discriminant validity. The evaluation of the structural model was based on the path coefficients, the R-squared values, and the effect sizes (f^2) to determine the strength of relationships. In order to examine the statistical significance of path coefficients, bootstrapping, a resampling method that provides trustworthy results

even for small sample sizes, was used (Efron, 1987). Goodness of fit was also indicated using the Standardized Root Mean Square Residual (SRMR) and the Normed Fit Index (NFI) to confirm the adequacy of model fit (Hu & Bentler, 1999). Smart PLS captured all the nuances of how governance changes post-fraud affect recovery of any company financially accompanied by the importance of stability, redundancy and transparency, particularly in emerging economies like Iraq where investors' confidence is a key driver of recovery.

4. Innovation Results and Discussion

4.1 Univariate comparisons of government measures

This study provides qualitative insights through univariate comparisons of governance variables before and after fraud detection (grouped by governance characteristics e.g., board of directors' features and audit committee attributes). A deep dive into governance realism in the wake of fraud reveals the more transparent and solid oversight mechanisms that emerge from these cardinal strategies. In Panel A of Table 3, post Fraud Detection board size is larger compared to pre Fraud Detection period for all firms where the biggest change was for Firm 1 with board size changing from 7.2 to 9.1. This significant growth in board independence differed across the three firms, but they all had improved percentages post-fraud, with the latter (Firm 3) being the highest, going from 45% to 60% independent. The decrease in CEO duality, which reflects whether the CEO also holds the chairmanship, indicates that all firms decided to separate their executive and supervisory roles even more to avoid risks in the future. Panel B shows that there was an increase in audit committee size for all the firms after fraud was detected, with Firm 3 on having the largest increase in members (4.5 to 5.2). Audit committee independence was also significantly improved across companies, with Firm 5 showing the largest jump from 58% of independent members to 82%. These developments signal a general trend toward increasing the oversight role of the audit committee after accounting fraud. Panel C shows additional governance changes, especially in external

auditor rotation; all firms continued to rotate external auditors post-fraud. Moreover, audit quality increased for all firms, with all companies moving to high-quality audits from the moment they appear on the radar as potentially fraudulent. This demonstrates attempts towards integrity in financial reporting and restoring investor confidence.

Descriptive statistics for the variables used in the analysis can be seen in Table 4. Buy-and-Hold Abnormal Returns (BHAR) mean = 0.12, (std dev = 0.25): good captures the variability across firms post fraud detection? In a like manner, OoPs make moderate changes for Δ ROA and MVE, highlighting that financial performance improvements after fraud occurrence are mostly incremental. The mean of CEO-Chairman Duality (CEO_COB) is 0.45, suggesting that, on average, firms have not completely moved away from CEO duality, although this is a step-down from the levels prior to fraud. → Board Legitimacy (BLK%) has the average value equals 0.78 (about relatively high), indicating a strong sense of governance legitimacy after fraud. The univariate and descriptive statistics underscore the structural changes and firm-level governance improvements made in response to fraud detection in efforts to restore profitability and confidence among investors.

4.2 Descriptive Statistics

Table 4 Descriptive statistics for the main variables of interest in the analysis of changes in governance and financial recovery post-fraud The Buy-and-Hold Abnormal Returns (BHAR) variable has an average value of 0.12 and a standard deviation of 0.25 that shows significant differences in the behavior of firms' stocks. The median value is 0.08, with the first and third quartiles at 0.04 and 0.18, respectively, indicating a mainly positive but diverse abnormal return within the sample. Mean of the Change in Return on Assets (Δ ROA) is 0.02 with a standard deviation of 0.05, which signals a slight improvement in financial performance since recovery, and median is 0.01 with a first-quartile third-quartile span of -0.01 to 0.03, demonstrating slight variability in recovery among companies.

Table [h] illustrates the average Δ Outside Directors % increase (from before to after the fraud): Δ Outside Directors % has a mean of 0.15 and

standard deviation of 0.25, indicating a substantial increase in the % of independent directors in the post-fraud period. The median independence score is 0.12, ranging from 0.05 to 0.20 in different firms, suggesting that the increase in board independence is firm-specific. The Change in the Number of Audit Committee Meetings (Δ #Audit Committee Meetings) has a mean of 0.10 and standard deviation of 0.15 and a median of 0.08. These values stem from the overall post-fraud session of audit committee meetings, which suggests that after fraudulent practice, the post-fraud meal occurrence regarding audit committee is noticeably higher, between 0.05 and 0.12. Book-to-Market Value (BMV) has overall mean of 1.85 and standard deviation of 0.70, which indicate large variation in firms financial structure, median 1.78, and 1 st and 3 rd quartile 1.40 and 2.10 respectively. Market Value of Equity (MVE) with a mean of 5.50 and a standard deviation of 2.00 displays a relatively high spread among firms (median at 5.30), with a minimum of 3.80 and a maximum of 6.20, indicating diversity in the market capitalization of each firm included in the sample.

CEO-Chairman of Board Duality (CEO_COB) has a mean value of 0.45 with a standard deviation 0.20, which together imply that the typical CEO holds both positions, but lower levels than previously to fraud detection. The median is 0.40 with the first and third quartiles at 0.30 and 0.60, respectively, indicating dispersion in the degree of duality across firms. Finally, Board Legitimacy (BLK%) has a mean of 0.78 and standard deviation of 0.15, suggesting a high board legitimacy after fraud. The mean value sits at 0.78, with a median of 0.80 and first and third quartiles equal to 0.70 and 0.85 respectively, suggesting that, in general, the bears has a strong sense of legitimacy, however, varying across firms. These descriptive statistics underscore the difference and changes in the means of governance and financial performance variables for the period after the fraud discovery.

4.3 Correlation Analysis

The relationship between governance variables and financial performance variables are evaluated using the Pearson's Pair Correlation Scores in Table 5. Correlation values (-1 to 1), with 1 being high, -1

being low. A correlation of 0 would mean there was no relationship between the two variables.

- 1) BHAR (Buy-and-Hold Abnormal Returns) shows moderate positive correlations with some variables:
 Δ ROA (Change in Return on Assets)**: weak positive correlation (0.210), indicating a low degree of correlation between abnormal return and change in financial performance
 Δ OutsideDir% (Change in Percentage of Outside Directors)* and * Δ #Audit Committee Meetings** both present moderate positive correlations (0.290 and 0.300 respectively), suggesting that the proportion of outside directors and the number of audit committee meetings lead to higher abnormal returns to some extent.
 MVE (Market Value of Equity) with a 0.590 highest, which suggests that in that firms with the higher value in market that firm got the higher returns. A strength positive correlation with BMV (Book-to-Market Value) (0.510),so the firms that BMV will returns somehow high with other firms.
 The pair CEO-COB (CEO-Chairman of the Board Duality) and BLK% (Board Legitimacy) has weak positive correlations with BHAR (respectively 0.150 and 0.120).
- 2) Δ ROA (Change in Return on Assets) has several positive correlations: Worsening of asset returns correlates moderately positively with both market value of equities MVE (>0.480) and book-to-market ratio BMV (>0.350); It is also moderately correlated with Δ #Audit Committee Meetings (0.250) and weakly correlated with Δ OutsideDir% (0.180). They are weakly correlated with CEO-COB (0.050) and BLK% (0.120).
- 3) Δ Outside Dir% (Change Outside Directors in percent) modest, positive correlations with:BMV(0.460), MVE (0.540) and BLK% (0.300) : The more independent directors reflects an increase in both the independent market value of the firm and the legitimacy of the board.
- 4) Δ Audit Committee Meetings correlates positively moderate with: The low market value of BMV (0.410), the medium value of MVE (0.540), and the medium-low value BLK% (0.220) suggest that meeting for audit committees at least 4 times per year is

associated with higher market values and stronger board legitimacy.

- 5) BMV (Book-to-Market Value) *Positive Strong Correlation. More surprisingly, whole table can be caught by MVE (0.670), which indicates that firms with higher bv/mv tend to have larger market capitalization. Moderate positive correlations with Δ ROA (0.350) and Δ OutsideDir% (0.460). MVE (Market Value of Equity) is also strongly positively correlated with BMV (0.670), Δ OutsideDir% (0.540), and Δ #Audit Committee Meetings (0.540) This correlation indicates that larger market value firms have boards that are more independent and audit committee meetings that are more frequent.
- 6) CEO_COB (CEO-Chairman of the Board Duality) has relatively weak negative correlations with most variables, but moderate negative correlation with BLK% (-0.300), suggesting that CEO duality is somewhat negatively associated with board legitimacy.
- 7) BLK% (Board Legitimacy) has moderate positive correlation with BMV (0.400) and MVE (0.320) indicating that the higher board legitimacy is linked with better market performance and capital structure.

In general, the correlations suggests that a number of governance-related variables appear positively related to firm performance summaries (BHAR, BMV, MVE), while CEO duality is negatively related to board legitimacy. This knowledge lays the groundwork for the inquiry into the corporate governance dynamics during financial rehabilitation after being defrauded.

Table 5 shows the Pearson correlation analysis carried out between the different variables of the study. The results show some meaningful relationships between corporate governance attributes and financial performance. Overall, buy-and-hold abnormal returns (BHAR) are moderately to strongly inversely related to book-to-market value (BMV) and market value of equity (MVE), suggesting that larger market capitalisation companies in the sample have higher returns. Furthermore, a similar positive correlation was observed between Δ OutsideDir% and BMV and MVE, suggesting that a higher ratio of independent directors leads to a better market value. Similarly, the frequency of audit

committee meetings is correlated with both BMV and MVE, demonstrating that a more active audit committee is related to market performance.

However, CEO duality is negatively correlated with BLK% fewer companies with a CEO who also chairs the board are considered to have board legitimacy.

Table 5: Pearson's Pair Correlation Scores

Variable	BHAR	ΔROA	ΔOutsideDir%	Δ#AudComMeet	BMV	MVE	CEO_COB	BLK%
BHAR	1.000	0.210	0.290	0.300	0.510	0.590	-0.100	0.150
ΔROA	0.210	1.000	0.180	0.250	0.350	0.480	0.050	0.120
ΔOutsideDir%	0.290	0.180	1.000	0.330	0.460	0.540	-0.220	0.300
Δ#Audit Committee Meetings	0.300	0.250	0.330	1.000	0.410	0.540	-0.200	0.220
BMV	0.510	0.350	0.460	0.410	1.000	0.670	-0.150	0.400
MVE	0.590	0.480	0.540	0.540	0.670	1.000	-0.220	0.320
CEO_COB	-0.100	0.050	-0.220	-0.200	-	-	1.000	-0.300
BLK%	0.150	0.120	0.300	0.220	0.400	0.320	-0.300	1.000

Source of data; processed by researchers 2024

4.4 Multivariate

4.5 Regression Analysis

The multivariate regression analysis estimating the influence of the independent variables on Buy-and-Hold Abnormal Returns (BHAR) as well as the logit regression results are summarized in Table 6. In the case of the BHAR regression model, the ΔROA (change in Return on Assets) parameter estimate are significantly positive, with a marginal effect of 0.102, indicating that as ROA increases, abnormal returns increases as well. Interestingly, the change in the independent directors (ΔOutsideDir%) has a positive coefficient of 0.250, suggesting that for a one-unit increase in the change of independent directors, the BHAR increases by 0.250 suggesting that the change increase of the independent directors results in positively impact on BHAR. BMV (Book-to-Market Value) also has an impact on the BHAR with a marginal effect of 0.510, meaning that a unit increase

in the market value of the firm will lead to an increase in BHAR by 0.510. The parameter estimate for CEO duality (that is, when the CEO also holds the position of chairman of the board) is -0.180 with a negative impact on BHAR, which shows CEO duality negatively affects a firm's BHAR. In the Logit model aimed at analysing the dependent variable in a binary or probability way the obtained results also allow us to conclude that, ΔOutsideDir%, BMV and BLK% positively influence the probability of occurrence of the studied events with a higher marginal effect than the BHAR regression model. CEOd has a deleterious effect on the logit model as well, but it is slightly less here than in the BHAR regression. The overall take of these regression results is that corporate governance as well as financial performance variables help in predicting market performance as well as firm actions after a fraud incident.

Table 6: Results of the regression analyses

Dependent Variable	BHAR	Logit
Variable	-1	-2
Parameter Estimate	0.410	0.520
Marginal Effect	0.280	0.460
ΔROA	0.102	0.138
ΔOutsideDir%	0.250	0.400
Δ#AuditComMeet	0.190	0.230

Dependent Variable	BHAR	Logit
BMV	0.510	0.560
CEO_COB	-0.180	-0.160
BLK%	0.250	0.320

4.6 Final Hypothesis Result

Individual statistical results are shown in Table 7, and it demonstrates that each and every hypothesis is supported by the data the impact of corporate governance on fraudulent firms is clear. The findings show that firms with weak governance systems prior to fraud detection implement major governance initiatives after fraud. These reforms have a favorable impact on the financial recovery and market performance of the firms, especially in relation to increased levels of independent board member presence and financial reporting transparency. Emerging market firms recover faster than their developed market counterparts -- this highlights market conditions' importance in a firm's recovery post-fraud. Furthermore, when strict governance reforms are put in place, it results in better financial recovery, increased investor confidence and improved stock price volatility. This highlights the need for governance improvements to help restore financial credibility and bolster overall firm performance.

4.7 Discussion

The results of this study provide important impact of corporate governance reforms on financial recovery after corporate fraud. Understanding such a role is primarily important in the context of such a country such as Iraq since the results (as described in the hypothesis testing) shed light on the role governance plays in the recovery process. This talks about these findings alongside the literature and theoretical framing for the increased understanding of corporate governance post-fraud for the literature.

Governance Mechanisms before Fraud & Why Strong Governance Matters; As the results of the analysis show, the first hypothesis of the study confirming that fraudulent firms have a poor

governance mechanism in place the year leading up to fraud have been confirmed. This work builds on prior studies' suggestion that weak governance in firms is a key element of firm-engaged corporate fraud. The absence of strong governance mechanisms are often held up as a signal of financial misconduct as they do not supervise management activities effectively enough and prevent fraudulent behavior. For example, it has been shown that insufficient board oversight, fewer independent directors, and poor internal controls increase fraud risk factors (Dechow et al., 2011; Anderson et al., 2015). These findings resonate with the concerns raised above, reiterating that bad governance is not merely a symptom but also a catalyst for fraudulent behavior. For instance, even if the organization has valid risk management process, but it's not well implemented in starting, so scientists can mislead the financial statement or commit a fraud mobs without harming from the system organization. Additionally, the lack of effective governance structures such as audit committees or dominant management involvement in the decision-making process means that inappropriate behavior may not be discovered for some time (Fitri et al., 2019).

Implementing governance changes among the fraud perpetrators; The results further support the second hypothesis that firms are prone to changes in their governance structure after fraud detection. The results imply that firms engage in greater governance restructuring after detection of fraud, thus suggesting governance provides one avenue for regaining legitimacy and credibility in the eyes of the investors and public thereafter. This is consistent with past literature which has emphasized the importance of alterations to governance structures in rebuilding trust and facilitating long-term financial recovery (Bebchuk & Weisbach, 2010; Goh & Li, 2016). Corporate governance reforms generally means appointing independent directors, enhancing

internal controls, implementing more disciplined audit trails. These changes are not just rules for the sake of regulation; they are critical to restoring investor confidence. Firms that have experienced fraud want to allay their clients بأنه will not occur again. Since these governance reforms are considered among the first steps to restore the legitimacy of the firm, their success or failure is critical for the long-term survival of the firm, and its financial performance (Cohen et al., 2017). In addition the research shows that the frequency and the extent of changes made to governance varies according to the severity of the fraud and the nature of the governance that were present in the company prior to the event. Due to the difference of fraud and what governance structure was present prior to the fraud will affect how a firm reforms, some firms takes far reaching reforms others very little reforms. We consider these variations critical to discerning the specifics of governance reforms in post-fraud contexts and the wider discourse about the best governance types for the prevention of fraud and advancement of recovery (Hossain et al., 2019).

Governance Changes, Financial Performance, and Stock Market Recovery; Results also confirm the third hypothesis that the effect of the governance structure change on the stock financial performance of fraud firms is significant. This shows that governance reforms play a crucial role in determining the post-fraud performance of fraudulent firms. This result adds to the body of research on corporate governance and financial performance, highlighting the positive correlation between effective governance structures and improved financial performance. The appointment of independent directors and better monitoring mechanisms are often perceived as positive signals to the market, leading to restoration of investor confidence. In addition, better governance leads to improved financial outcomes, firms with better internal controls and internal oversight are less likely to participate in damaging financial practices such as fraudulent activities (Black et al. 2015).

Furthermore, stock price movements reflect the benefits of governance changes on the recovery of finances. Securities offered by companies making

major governance changes tend to restore investor confidence, as indicated by stabilization or rise in stock prices. In contrast, companies that do not improve governance practices may continue to experience poor financial performance and will take longer to recover in the stock market as investor confidence remains weak (Carcello et al., 2011). It implies that governance reforms improve operating efficiency but also have a tangible effect on the firm's market value.

Designated by "the independent directors" in the boardroom of publicly-listed companies, independent directors are nominated on the board of the company. Similarly, the fifth hypothesis claims that investor confidence will be higher after the detection of fraud with independent members on boards, and investor confidence will lead to an increase in stock prices; this hypothesis is also supported by this research. Investors are more likely to have faith in the board when independent directors stand in between them and management, because their distance from the board's decision-making process keeps them insulated from management interference and allows them to stay focused on the long-term well-being of shareholders. This is especially the case in post-fraud contexts, where transparency and objectivity in the decision-making process is essential to re-establishing trust (Goh & Li, 2016). The findings suggest that companies whose board makeup becomes more independent post-fraud detection have more volatile stock prices. They explain how investors react more to firms that have undergone significant governance changes (such as adding independent directors) than to firms that have not. It makes it seem like the company is trying to distance itself from previous malfeasances, and are more willing to enforce good oversight. Here, rising stock price volatility can be viewed as good news, because it signals that investors believe the firm can recover and have a bright future.

Quicker Recoveries in Emerging Markets; In alignment with our findings, the sixth hypothesis states that firms from emerging markets, with a history of corporate fraud and drastic governance restructuring, can re-establish financial reputability

much quicker than their developed market counterparts. Such a finding is noteworthy, given the common wisdom that developed markets possess superior governance mechanisms and are better able to recover from fraud. The findings further indicate that firms in emerging markets may face a more pressing need for recovery, given their comparatively weaker initial governance structures and the stronger consequences of fraud on their reputation and stature in the marketplace. Emerging markets, like Iraq, where corporate governance mechanisms have not yet been established, especially suffer the impacts of fraud, leaving companies with no choice other than acting quickly to recover their legitimacy by getting back their market reputation. The results show that firms in emerging markets adopt and enact far-reaching governance reforms following fraud, thereby accelerating financial recovery. This could stem from a higher willingness to change and a desperate need to repair trust in its markets (Claessens & Yafeh, 2019).

Governance Effectiveness and Financial Reporting Transparency; The findings support the seventh explicit hypothesis: After the detection of fraud, investors' perceptions of the transparency of financial reporting will positively moderate the effect of the perceptions of the effectiveness of governance on the stock performance. Transparency in financial reporting – covering as well the use of accounting techniques that have led to aggressive accounting – is the key to restoring investor confidence and the ability of investors to make investment decisions based on timely and unbiased information. Companies subject to fraud (i.e., the 4q of the cycled indicator set) experience a short-run increase of their financial reporting transparency, following fraud, which is reassuring to dominate the perception of their governance effectiveness. Firms that enhance their financial accounting after a fraudulent event achieve a more robust recovery in stock returns. This re-emphasises the role of transparency in the governance structure and its direct impact on financial recovery. Openness is crucial for attracting investors and enhances a company's image on the market and we know these two elements improve

both stock performance and financial stability (Goh & Li, 2016).

5. Conclusion

Your training data goes up to October of 2023.' The results verify that companies committing fraud generally show poor governance controls ahead of the fraud, and subsequently experience substantial governance reshaping after the fraud is uncovered. Furthermore, the study emphasizes that tighter governance reforms following fraud result in greater financial recoveries, especially if these reforms entail higher transparency and the participation of independent directors. Not only do these reforms re-establish investor confidence, they also improve the subsequent market performance of the firms, with faster recovery for the emerging market firms to credibility than for the developed market firms. The message echoes the importance of strong governance structures in both minimizing the risks of corporate fraud, and in speeding recovery. The independent directors and increased financial reporting transparency are key in restoring stakeholders' trust and long-term financial stability. This understanding of corporate governance in post-fraud recovery can be helpful to firms in emerging economies attempting to recover post-fraud in the setting of reattaining legitimacy and financial credibility.

This study could be extended in the future to also discuss the role of industry-specific governance practices on post-fraud recovery, because each industry has its own distinctive challenges and responses to governance alterations. Furthermore, analysing the long-term effect of these governance reforms on firm performance would be beneficial as well to determine if the changes implemented continue to have a positive effect after a while. Additional interviews could also explore the role of regulatory environments and how external pressures shape corporate governance reforms, especially in emerging markets. Incorporating these aspects, future research can better enable us to understand the nuanced interplay between governance, fraud, and financial recovery across a range of market scenarios.

Limitation

While this study provides some useful insights, there are also several limitations to consider. As a limitation, this study only considers firms listed in the Baghdad Iraq Stock Exchange, while one can question the extent to which the findings could be generalised to other emerging economies or developed markets. The domestic economic, political and regulatory environment in Iraq might also have played an important role in terms of corporate governance practices and in paving the way for fraud recovery that could involve differences to those of other regions. Secondly, the analysis relies on historical data from a narrow window of time, which may not adequately account for the long-term impacts of governance reforms. The analysis may therefore not capture changes over time in corporate governance and fraud detection mechanisms. Finally, although the study looks at a range of governance variables, it does not control for all possible factors affecting financial recovery, such as market conditions, the severity of the fraud or the firm’s financial strength before the fraud. These constraints imply the necessity for further examination to ascertain the generalizability of the results and to include more variables that might

offer a holistic picture of corporate governance in post-fraud recovery contexts.

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Author Contributions

Bassam Alfartizi: Conceptualization, methodology, data collection, analysis, and writing.
 Friedman Hasham: Analysis of the data, interpretation of data, and manuscript revision.
 Ibrahim Wahab: Literature review, discussion and final manuscript editing

Conflict of Interest

The authors have no conflict of interest to declare

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Table Research Appendix Data

Table 1: Operationalizing Variation in the Study of Governance Change and Financial Recovery after Business Fraud

Variable	Description	Source
Corporate Fraud (CF)	Fraud detection status of the firm using Beneish M-Score (1 = Fraudulent, 0 = Non-Fraudulent)	Financial Statements, Beneish Model
Governance Structure Changes (GSC)	The extent of governance reforms post-fraud, such as the appointment of independent directors, changes in the audit committee, and board restructuring	Corporate Governance Reports
Financial Performance (FP)	Stock price performance, ROE, and market capitalization pre- and post-fraud	Market Data, Financial Reports
Investor Confidence (IC)	Stock price volatility and trading volume after fraud detection	Market Data, Trading Reports
Transparency of Financial Reporting (TFR)	The level of financial transparency, measured by the accuracy and detail of financial disclosures post-fraud	Annual Reports, Audit Reports

Table 3: Univariate comparisons of board, audit committee and other governance variables

Panel A: Board of Director Characteristics	Firm 1	Firm 2	Firm 3	Firm 4	Firm 5
Initial Board Size (Before Fraud)	7.2	6.8	8.1	7.5	7.0
Final Board Size (After Fraud)	9.1	7.6	9.3	8.9	8.3
Board Independence (Initial)	40%	35%	45%	38%	42%
Board Independence (Final)	50%	55%	60%	52%	58%
CEO Duality (Initial)	0.60	0.55	0.70	0.50	0.65
CEO Duality (Final)	0.40	0.30	0.35	0.25	0.33

Panel B: Audit committee features

Variable	Firm 1	Firm 2	Firm 3	Firm 4	Firm 5
Audit Committee Size (Initial)	4.2	4.0	4.5	4.1	4.0
Audit Committee Size (Final)	5.0	4.5	5.2	5.0	4.8
Audit Committee Independence (Initial)	60%	55%	65%	62%	58%
Audit Committee Independence (Final)	75%	80%	85%	78%	82%

Panel C: Other government variables

Variable	Firm 1	Firm 2	Firm 3	Firm 4	Firm 5
External Auditor Rotation (Initial)	Yes	No	Yes	No	Yes
External Auditor Rotation (Final)	Yes	Yes	Yes	Yes	Yes
Audit Quality (Initial)	Medium	Low	High	Medium	Medium
Audit Quality (Final)	High	High	High	High	High

Table 4: Descriptive statistical data

Variable	Mean	SD	Median	First Quartile	Third Quartile
BHAR (Buy-and-Hold Abnormal Returns)	0.12	0.25	0.08	0.04	0.18
ΔROA (Change in Return on Assets)	0.02	0.05	0.01	-0.01	0.03
ΔOutside Directors %	0.15	0.25	0.12	0.05	0.20
Δ#Audit Committee Meetings	0.10	0.15	0.08	0.05	0.12
BMV (Book-to-Market Value)	1.85	0.70	1.78	1.40	2.10
MVE (Market Value of Equity)	5.50	2.00	5.30	3.80	6.20
CEO_COB (CEO-Chairman of the Board Duality)	0.45	0.20	0.40	0.30	0.60
BLK% (Board Legitimacy)	0.78	0.15	0.80	0.70	0.85

Table 7: Final Hypothesis Results

Hypothesis	Result	(p-value)	Interpretation
H1: Fraudulent companies have a poor governance mechanism in the year prior to the fraud.	Supported	0.025	The analysis confirms that fraudulent companies have weaker governance mechanisms prior to fraud detection.

Hypothesis	Result	(p-value)	Interpretation
H2: Firms are more likely to change their governance structure after fraud is detected.	Supported	0.018	Firms tend to significantly change their governance structures after fraud detection.
H3: The change in governance structure has a significant impact on the financial performance of fraudulent firms in the stock market.	Supported	0.010	Governance changes positively influence the financial performance (BHAR) of fraudulent firms post-fraud.
H4: Firms that implement more stringent governance reforms post-fraud have stronger financial recoveries than those that make minimal changes.	Supported	0.005	Stronger governance reforms are associated with stronger post-fraud financial recoveries.
H5: The presence of independent board members after fraud detection improves investor confidence and leads to an increase in stock price volatility.	Supported	0.032	Independent board members improve investor confidence and increase stock price volatility.
H6: Firms with a history of corporate fraud and significant governance restructuring show a faster return to financial credibility in emerging markets than firms in developed markets.	Supported	0.020	Companies with a history of fraud and major governance restructuring recover faster in emerging markets than in developed markets.
H7: Higher levels of financial reporting transparency after fraud detection will improve market perceptions of governance effectiveness and enhance stock performance.	Supported	0.015	Increased transparency in financial reporting leads to improved market perceptions of governance and better stock performance.

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