**ENVIRONMENTAL RISK MANAGEMENT CONTROL AND THE QUALITY OF FINANCIAL STATEMENTS IN THE NIGERIAN NON-FINANCIAL FIRMS**

**Abstract**

The study investigated the relationship between environmental risk management control and the quality of financial statements in Nigerian non-financial firms. The study utilised a survey research design. The study's population comprised five thousand, two hundred and thirty-four (5,237) employees from thirteen (15) iron and steel industries in Lagos State, Nigeria. The research sample (400) was calculated using the Taro Yamane formula. Multistage sampling, including cluster, quota, and convenience procedures, was used to deliver research instruments to respondents. The study utilised a structured questionnaire. The data was analysed using descriptive and inferential statistics in Eview version 12. The study concluded that environmental risk is the most important factor influencing the quality of financial statements. Furthermore, both management risk control and risk control strategies have had no discernible effect on the quality of financial statements. The study indicated that the quality of financial statements is more important in predicting the outcome of a solid baseline since the non-significance of variables reveals the intricacy of the situation at hand. The study recommended that organisations should prioritise ways of addressing environmental risks, possibly through more robust environmental risk management strategies and tools; there should be a review of management risk control measures to explore alternative ways to improve management's role in risk mitigation to provide a more comprehensive understanding of the factors influencing the quality of financial statements; and re-evaluation of risk management technology.

 **Keywords:** Management of risk control, environmental risk, risk control technique, and quality of financial statements

**1.0 Introduction**

Globally, there are concerns regarding the timeliness, completeness, and quality of financial reporting, regulatory enforcement and corporate governance practices of different levels. Low-quality financial reporting misled stakeholders, cause market valuation distortions, and hinder economic growth (Falana et al., 2025; Pratama et al., 2025). In the developing world of countries like Nigeria, the reliability of financial statements is often compromised by weak regulatory frameworks, ineffective internal control frameworks, and transparency shortcomings (Ezekiel et al., 2024). Nigeria's non-cash firms have distinctive challenges that entail environmental concerns that are not well captured in their financial statement, hence providing a misleading picture of their true financial position. Environmental risk management control (ERMC) is paramount in minimizing risks since it combines environmental factors in financial reporting such that there is adequate disclosure and accounting for risks such as fines for being regulatory non-compliant, environmental risks, and sustainability issues (Abass et al., 2024).

Environmental risk and management significantly enhance the quality of financial statements through the handling of potential threats having a significant influence on business performance. Environmental risk, as noted by Kodiya et al. (2025), is the potential adverse environmental impacts of activities in an organization, in addition to risks ensuing from changes in response to changing regulations. Sound environmental risk management control (ERMC) allows for non-financial institutions to identify, assess, and address environmental risks, hence correct reporting in the financial statements (Oyekunle, 2024). In keeping with international environmental standards, internal audits and risk assessments allow the identification and recording of environmental issues using risk controls. Omonori and Ayegbo (2025) argue that environmental risk management is connected with financial statement quality in that firms that are capable of managing their environmental risks are likely to come up with credible, complete, and precise financial information, thereby enhancing investors' confidence as well as meeting regulatory demands. The study will examine the control of environmental risk management systems in Nigerian non-financial firms to financial report quality to document evidence enhancing financial disclosure and corporate governance in general within Nigeria.

**1.2 Statement of the Problems**

The growing sophistication of environmental hazards has posed questions on the efficacy of risk control mechanisms in Nigerian non-financial corporations. Albeit heightened consciousness of environmental risk, the accuracy of financial reporting in such companies is still a primary concern that is sometimes impacted by poor risk management systems. The inability to integrate full environmental risk management systems into financial reporting systems compromises the accuracy, reliability, and transparency of financial statements, hence impacting investment decisions and thus compromising overall corporate responsibility (Falana et al., 2025; Edo et al., 2024; Owheruo, 2024). In particular, Nigerian non-financial companies are faced with poor environmental risk evaluation systems, lack of consistency in the implementation of measures to control risk, and weaknesses in regulatory enforcement; all these issues erode the stakeholders' confidence and lower the firms' international market credibility. Ineffective environmental risk management control results in deceptive financial statements that fail to capture the actual financial position of firms as it has a significant bearing on investors, regulatory bodies, and other stakeholders who can make their decisions on the basis of these false statements. Further, such defects assist in magnifying environmental risks, hence harming the company as well as the environment that is around it over a long duration of time. A number of steps in environmental risk control and enhancing financial statement quality in Nigerian non-financial companies These include the provision of guides such as the Nigerian Environmental Standard and other risk controls such as risk analyses, auditing, and following International Financial Reporting Standards (IFRs). These are still not balanced, though, and environmental risk control is being utilized haversally throughout the sector. Limitations to realizing complete utilization of such advantages are insufficient training, ineffective means of risk management, and ineffective regulation enforcement (Egieya et al., 2024). By providing a systematic means of identifying, evaluating, and controlling environmental risks impacting financial performance and involving environmental risk in the process of financial reporting by firms to better reflect liabilities, asset worth, and prospective environmental costs, environmental risk management control greatly enhances the reliability of financial statements. Addressing these identified problems the following research questions were raised.

1. What is the influence of environmental risk on the quality of financial statements in Nigerian non-financial firms?
2. How dose the risk control technique impact the quality of financial statements in Nigerian non-financial firms?

The study investigated the relationship between environmental risk management control and the quality of financial statements in Nigerian non-financial firms. The study specifically;

1. examined the influence of environmental risk on the quality of financial statements in Nigerian non-financial firms;
2. evaluate the effectiveness of risk control techniques on the quality of financial statements in Nigerian non-financial firms.

**1.3 Hypotheses Statement**

**H01:** Environmental risk has no significant influence on the quality of financial statements in Nigerian non-financial firms;

**H02:** There is no significant relationship between risk control techniques and the quality of financial statements in Nigerian non-financial firms.

**2.0 Literature Review**

**2.1 Conceptual Review**

**2.1.1 Quality of Financial Statements**

The degree to which financial statements deliver accurate, reliable, and timely information to stakeholders thereby allowing them to make sound financial decisions (Falana et al., 2025).

The degree to which financial statements comply with accounting standards, fairly reflect economic performance and position, and are free from bias, error, and manipulability is their quality of financial statements. Such statements should be within accepted frameworks such as Generally Accepted Accounting Principles (GAAP) or International Financial Reporting Standards (IFRs) since quality financial statements are clear, comparable, and an accurate reflection of the financial position of an entity upon which investors, creditors, and regulators rely for assessing the performance and financial standing of an organisation and such statements should be compliant with accepted frameworks such as Generally Accepted Accounting Principles (GAAP) or International Financial Reporting Standards (IFRs). Transparency in disclosure and presentation of financial data increases trust and minimizes suspicion of decision-making. Poor-quality financial reports are marked by inaccurate and incomplete data resulting in erroneous conclusions and legal consequences (Osiga-Aibangbee et al., 2025). Quality is ensured by tight internal controls, frequent audits, and adherence to ethical accounting principles.

**2.1.2 Environmental Risk Management Control**

Environmental risk management control (ERMC) is the scientific identification, estimation, and management of risks from a wide range of human activities that can pose threats to the environment. Environmental risk management control, according to Adekanmi et al. (2025), is how organizations evaluate environmental risks, deploy strategies to mitigate or manage these risks, and review their efficiency to cause as little damage as possible to ecosystems and populations. Recognition of possible environmental hazards such as pollution, resource depletion, and habitat destruction guarantees that company operations do not result in unsustainable environmental deterioration (Niyi-Odumosu et al., 2025). Environmental risk management control is therefore extremely vital. Once hazards are identified, firms implement controls through which they adhere to legislation, eco-friendly programs, emergency response schemes, and software monitoring alongside periodical check-ups to ascertain how effective these initiatives are (Ogwu et al., 2025). By integrating ERMC into operations, business conserves the environment and reduces possible financial losses due to environmental degradation nature of environmental policies shifts so that organisations must remain agile and proactive in their risk management regimes (Sun et al., 2025).

**2.1.2.1 Environmental Risk**

Adekanmi et al. (2025) define environmental risk as the probability of negative consequences arising from human activity, natural disasters, and industrial processes on the environment. Environmental risk, as defined by Ogwu et al. (2025), is the probability that pollution, overutilization of natural resources, global warming, and other environmental intrusions would disturb ecosystems, wildlife, and natural resources. From biodiversity loss and climate change to water and air pollution, environmental risks are intricate and involve deforestation, industrial operations, and intensive farming all contribute to them. Environmental risks always have long-lasting impacts on public health, world ecosystems, and living environments of other species. Environmental risk management demands evaluation of possible hazards, the consequences of their occurrence, and incorporating measures to reduce harm such as cleaner technology, making environmental laws, and thus funding sustainable practices (Sun et al., 2025; Abass et al., 2024). Climate change is an environmental global risk sufficiently depicting the reason for global action to prevent and mitigate its impact.

**2.1.2.2 Risk Control Technique**

Adekanmi et al. (2025) defined environmental risk as the possibility of unwanted effects as a result of the influence of man, natural catastrophes, and industrial operations on the environment. Environmental risk, as defined by Ogwu et al. (2025), is the possibility that pollution, depletion of resources, global warming, and other types of environmental interventions would threaten ecosystems, flora, and natural resources. From biodiversity depletion and climate change to air and water pollution, environmental dangers are intricate and span deforestation, extensive agriculture, and industrial processes all contribute to them.

Environmental dangers normally exert lasting impacts on the health of the general population, worldwide ecosystems, and wildlife habitats for diverse species. Management of environmental risk calls for the identification of possible hazards, awareness of their effects, and implementing of harm-reducing mechanisms like employing cleaner technology, ensuring environmental law, and thus maintaining sustainable actions (Sun et al., 2025; Abass et al., 2024). Climate change is an environmental menace globally that reasonably illustrates the cause of global action in curbing and preventing its impacts.

**2.2 Theoretical Review**

This study underpinned on the green accounting theory as the theory explains the theory that

**2.2.1 Green Accounting Theory**

Grey (1993) developed green accounting theory, which emphasizes the integration of environmental factors into national and business accounting systems in an attempt to better portray the true environmental costs of economic production. Green accounting, according to Ogochukwu et al. (2024), is the field of accounting for nature in a way that does justice to the economic worth of natural resources, environmental services, and ecological costs, in the hope of achieving sustainable economic development. The theory calls for adjustments in traditional bookkeeping procedures for recording environmental effects, pollution, and consumption of natural resources that the standard accounting process neglects (Adebanjo & Wisdom, 2024). The approach bridges economics and the environment as it demands that not considering cost factors within an environment does cause inaccurate cost projections economically, along with unsustainable advancement. Green accounting permits the quantification of the actual cost of products and services through the inclusion of environmental harm in financial reports to enable more sound decisions to support sustainability (Etim et al., 2024).

The idea has been on the rise as people more and more care about climate change, biodiversity loss, and loss of natural resources. But its actual application is confronted with significant issues, including the difficulty of quantifying environmental assets in financial units and opposition from companies that profit from the current state of affairs (Tite et al., 2024). The theory posits that environmental costs may be measured and integrated into accounting structures in order to give a more complete understanding of economic sustainability; governments as well as businesses are eager to utilize green accounting principles to make environmental improvements easier (Abaa et al., 2024). Green accounting theory is claimed to be too subjective in approach to assigning monetary value to the natural resource and environmental degradation and, therefore, results in inconsistencies and conflict regarding how ecological assets must be valued (Abubakar et al., 2024). Many sectors have the luxury of overlooking green accounting due to the economic obstacle of incorporating environmental costs into financial reports and thus impeding the adoption of the theory (Tite et al., 2024; Adebanjo & Wisdom, 2024).

**2.3. Empirical Review**

Ahadzadeh and Vakilifard (2025) conducted an evaluation of the International Financial Reporting Standards in Iran and their impact on the quality of accounting financial statement. The statistical population of the study is 96 finance managers in 2023 who compile the financial statements and whose views on the impact of the implementation of the IFRS standard were gathered through a questionnaire. To analyze the data that was gathered, structural equation modeling and path analysis with PLS software were applied. this research is a descriptive-analytic study utilizing data collected from questionnaires and library research. its study determined that there is a positive and significant correlation between the presentation of financial statements in a uniform format and its relevance, transparency, dependability, comparability, and understandability.

Falana et al. (2025) analyzed the degree to which corporate characteristics influenced the quality of financial reporting of Nigerian multinational firms. The researchers used a causal-comparative research design. The study population consists of 46 multinational firms that are based in Nigeria. The whole population was used to estimate the sample size for the research using the extensive survey method. The study lasted for thirteen years, from 2011 to 2023. Their data were gathered from the firms' annual reports and approximated using descriptive statistics and potential generalized least squares regression analysis. According to their study, innovation potential and firm size significantly and positively affected financial reporting quality. Firm leverage, however, has extremely strong negative impact on financial reporting quality. Pham et al. (2025) experimented to compare Big4 with non-Big4 auditing firms regarding their audit quality from the perspective of independent auditors.

Data were gathered from 226 respondents working at 20 independent auditing firms in Vietnam (4 Big4 audit firms and 16 Non-Big4 audit firms), holding positions like audit firm managers, audit heads of team, and auditors directly working on the audit. Sampling was carried out on a selective basis between April-August 2023. Using the quantitative research design by adopting SPSS version 22 software. Their study focused on the factors having a significant impact on the audit quality of Vietnamese commercial banks' financial statements. However, their study also did not discover any difference in the quality of Vietnamese commercial banks' financial statement audit by Non-Big-4 and Big-4 auditors. Omonori and Ayegbo (2025) examined the impact of risk management controls on the effectiveness of petroleum product distribution. Descriptive survey research design was utilized with a population sample of 181 respondents that were sampled from the population of 330 members of senior staff of oil and gas companies as well as government agencies in the Ondo State.

Purposive sampling as well as random sampling technique were used for choosing the subjects. Systematic questionnaire was applied for gathering data, which in turn were quantitatively examined with descriptive statistics as well as multiple regression. Their findings were that risk identification and risk assessment have positive significant effects on success in petroleum product distribution, while risk monitoring has a negative insignificant effect, and risk mitigation has a negative significant effect. Kodiya et al. (2025) give an extensive review of pollution of Nigeria's air, water, and land environments with focus on primary pollutants, their sources, and their effects on ecosystems and public health. Their evaluation includes data from peer-reviewed journals, government records, and international databases to provide a general impression of pollution. The most common causes of pollution in Nigeria were industrial effluents, vehicle exhausts, farm runoff, petroleum exploration activities, and improper disposal of waste as per their studies.

Interestingly, over half a century of oil extraction in the Niger Delta has resulted in the dumping of over 13 million barrels of crude oil and causing serious water, air, and land pollution. Osiga-Aibangbee et al. (2025) investigated health conditions in sediment and water from a selected area of Delta State, Nigeria. Twelve (12) sediment and twelve (12) water samples were randomly chosen and collected from four communities at 10 cm depth, with 200 g samples from each site at least 50 metres apart. CERD - IFE used Gamma-Ray Spectrometry with a thallium-activated 16″x16″ Sodium iodide [NaI (Tl)] detector to measure the activity concentrations of 238U, 232Th, and 40K. Sediment activity concentrations for 40K, 238U, and 232Th ranged from 294.29 ± 11.98 to 774.4 ± 10.92, 3.91 ± 0.06 to 14.13 ± 0.1, and 1.32 ± 0.05 to 5.29 ± 0.10 Bq/kg, respectively. The activity concentrations of water samples for 40K, 238U, and 232Th ranged from 232.32 ± 5.08 to 780.72 ± 9.31, 5.34 ± 0.06 and 11.29 ± 0.04, and 0.93 ± 0.04 and 3.07 ± 0.08 Bq/l, respectively. Based on health risk assessment, radium equivalent (Raeq) ranged from 242.34 to 556.41 Bq/kg with the mean value being 396.21 Bq/kg and was found to exceed the international standard of 370 Bq/kg.

Niyi-Odumosu et al. (2025) examined climate change policies, studies, initiatives, and activities at the subnational and national levels in Nigeria to determine whether or not their effects were impacting public and respiratory health. According to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMAScR) checklist, some of the significant reported respiratory air pollutants in Nigeria include particulate matter (PM2.5, PM10), gaseous emissions (CO, SO₂, NOx), farm by-products (NH₃, H₂S), greenhouse gases (CH₄, CO₂), and microbial pollutants. These air pollutants increase the risk of respiratory inflammation, infections, and exacerbation of chronic respiratory symptoms. Their findings reveal a strong relationship between climate change and declining respiratory health across the majority of Nigerian populations. Ogwu et al. (2025) abstracted a paper on the integration of advanced statistical methods, such as Bayesian modeling, machine learning, and geostatistics, into ERA frameworks for increased precision, reliability, and intelligibility of risk assessment. Using these new techniques, either alone or preferably combined, provides an improved understanding of the trace metal transport processes, bioavailability, and their environmental impacts can be ascertained while also allowing future trends in contamination to be forecasted.

Use of geographical and temporal analysis and uncertainty quantification improves hotspot contamination assessment and related risks. Oyekunle (2024) examined different risk management strategies and their impact on the performance of building construction projects. A survey research design was used and a questionnaire was the primary tool of data collection on a five-point Likert scale. The questionnaire aimed to collect data on the impact of risk management on project performance. Questionnaires were also supposed to collect data on risk identification as a practice of risk management and its impact on project performance. 85 questionnaires were distributed and used for analysis. His finding indicated a significant correlation between risk management methods and project performance. In a study by Ezekiel et al. (2024) talk of entrepreneurship development and risk management, the population studied was one hundred and eighty registered SMEs in the period of 2019 to 2023. Taro-Yamane's method of determination of the sampling (1967) was utilized to obtain a sample size of 124. Primary data was adopted with the use of a well-prepared questionnaire, 124 questionnaires were dispatched to the respondents but only 121 copies of the questionnaire were validly completed and used in this study. Data were examined using Pearson correlation and their findings reflected that risk management and entrepreneurship development are statistically significant and were part of the key SMEs components (p-value of F= 0.0000 < 0.05) having a positive regression coefficient of 0.01. Robust risk management practices were recommended to be designed to counteract potential weaknesses and enhance the resilience of entrepreneurial business to sustain business in the long term, through a balance between risk calculations and SMEs survival.

There is a void in the lack of a common framework of environmental risk management that is aligned with financial reporting principles among Nigerian non-financial companies. Failure to embed environmental risks within risk management and financial reporting mechanisms completely is to blame for erroneous financial disclosure and ineffective decision-making on the part of stakeholders. The deficit lies in weak implementation of environmental risk assessment processes, weak regulatory control, and inadequate corporate governance practices aimed at enhancing financial reporting transparency. The research is crucial to the government, investors, and the general public as the research provides an insight into loopholes in regulations and instigates policies that instill more effective environmental risk management practice and better financial reporting standards. Investors will most likely benefit from more credible and transparent financial reports that facilitate better-informed investment decisions. The general public also benefits from more responsible business conduct through improved environmental risk management leading to sustainable development and a safe environment. The study focused mainly on environmental risk management control and financial statement quality in Nigerian non-financial firms.

**3.0 Methodology**

To obtain data on environmental risk management control and financial statement quality, the study used a survey research design. The study population was five thousand, two hundred and thirty-four (5,237) workers in thirteen (15) Lagos State, Nigeria, iron and steel industries. The sample size of four hundred (400) was arrived at using the Taro Yamane formula. Multistage sampling, including cluster, quota, and convenience methods, was used in distributing research instruments to respondents. The questionnaire was constructed, and its validity was ascertained using the Cronbach Alpha reliability test. Environmental risk management control is the independent variable that is measured concerning environmental risk and risk control mechanisms. On the other hand, the dependent variable is financial statement quality as reflected in timeliness. Data were subjected to descriptive and inferential statistics using Eview version 12.

**4.1 Descriptive Statistics**

The descriptive statistics for the variables in the dataset reveal that the Quality of Financial Statements (QFS) has of mean value of 3.504 and a comparatively low standard deviation of 0.294, so that the values are reasonably clustered around the mean. QFS distribution is reasonably negatively skewed with a value of -0.580, and with a kurtosis of 2.708, it follows that the distribution is reasonably close to normal. Jarque-Bera statistic of QFS is significant (p = 0.000009), which confirms a deviation from normality. MGT\_RISKCONT measures 3.256 on mean, has a mild skew (0.299), and the kurtosis is 2.696, which is fairly close to normal but slightly pointed. The Jarque-Bera statistic (p = 0.0255) shows mild deviation from normality. ENV\_RISK is just above average in value, 3.327, with the same pattern of distribution of small positive skew (0.278) and with large Jarque-Bera test statistic (p = 0.000006) indicating non-normality. RISK\_CONTR\_TECHNIQUES has an average of 3.026 with even larger standard deviation (0.459) so there would be a greater spread of values. Its skewness is close to zero (0.096) while the kurtosis value of 3.093 illustrates a quite pointed distribution. Jarque-Bera test for this variable provides a non-significant result (p = 0.689), which suggests that the distribution is not significantly other than normal.

**Table 1: Descriptive Statistics**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | QFS | MGT\_RIKCONT | ENV\_RISK | RISK\_CONTR\_TECHNIQUES |
|  Mean |  3.504263 |  3.256394 |  3.327046 |  3.026215 |
|  Median |  3.666667 |  3.250000 |  3.250000 |  3.000000 |
|  Maximum |  4.000000 |  4.000000 |  4.000000 |  4.000000 |
|  Minimum |  2.666667 |  2.375000 |  2.500000 |  1.750000 |
|  Std. Dev. |  0.294022 |  0.334751 |  0.359312 |  0.459271 |
|  Skewness | -0.580385 |  0.299000 |  0.278107 |  0.096279 |
|  Kurtosis |  2.708330 |  2.695560 |  1.918736 |  3.092542 |
|  Jarque-Bera |  23.33710 |  7.335937 |  24.08732 |  0.743592 |
|  Probability |  0.000009 |  0.025528 |  0.000006 |  0.689495 |
|  Sum |  1370.167 |  1273.250 |  1300.875 |  1183.250 |
|  Sum Sq. Dev. |  33.71512 |  43.70277 |  50.35086 |  82.26255 |
|  Observations |  391 |  391 |  391 |  391 |

**Source: Researchers Computation (2025)**

Plotted against the dependent variable QFS, Generalised Linear Model (GLM) offers fresh insights of relevance. Having converged to uncover a solution of stable condition following a single iteration, the model had emerged by then. As 2.678, intercept (C) is technically highly significant and suggests a significant baseline effect. Positively 0.329, ENV\_RISK stands out amongst the predictors in that it indicates environmental risks have a positive impact on the outcome. But as their p-values are larger than 0.05, MGT\_RISKCONT and RISK\_CONTR\_TECHNIQUES are not statistically significant in their effect. The -52.801 log-likelihood and the LR statistic of 48.07097 with a p-value of 0.000 show the fit of the model overall and hence its statistical significance. The low value of the dispersion, 0.077493, shows an overall good fit of the model.

**Table 2 Generalized Linear Model (Newton-Raphson / Marquardt steps) Method**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | z-Statistic | Prob.   |
|  |  |  |  |  |
|  |  |  |  |  |
| C | 2.778339 | 0.159363 | 17.43407 | 0.0000 |
| MGT\_RISKCONT | -0.070720 | 0.049282 | -1.435012 | 0.1513 |
| ENV\_RISK | 0.329022 | 0.054561 | 6.030355 | 0.0000 |
| RISK\_CONTR\_TECHNIQUES | -0.045752 | 0.037465 | -1.221172 | 0.2220 |
|  |  |  |  |  |
|  |  |  |  |  |
| Mean dependent var | 3.504263 |     S.D. dependent var | 0.294022 |
| Sum squared resid | 29.98994 |     Log-likelihood | -52.80144 |
| Akaike info criterion | 0.290544 |     Schwarz criterion | 0.331145 |
| Hannan-Quinn criter. | 0.306637 |     Deviance | 29.98994 |
| Deviance statistic | 0.077493 |     Restr. deviance | 33.71512 |
| LR statistic | 48.07097 |     Prob(LR statistic) | 0.000000 |
| Pearson SSR | 29.98994 |     Pearson statistic | 0.077493 |
| Dispersion | 0.077493 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Source: Researchers Computation (2025)**

Whether variable QFS has a unit root, and therefore signals non-stationarity, is assessed using the Augmented Dickey-Fuller (ADF) test. The null is that QFS has a unit root. With a related p-value of 0.0000, the ADF test statistic is -6.497476, far below critical 1%, 5%, and 10% values of -3.447259, -2.868888, and -2.570751, respectively. This implies that we are rejecting the null hypothesis, thus QFS is surely stationary and does not contain a unit root. Another evidence of rejection of the null hypothesis is the statistical significance (t-statistic of -6.497476 and p-value of 0.0000) of the coefficient on the lagged term QFS (-0.795169). Apart from reflecting varying levels of significance are coefficients of the first, second, and eighth differences of QFS; the eighth lag (D(QFS(-8)) has a high significance (t-statistic of -3.389865, p-value of 0.0008). With a low R-squared value of 0.44, the model indicates that despite the contribution made by the independent variables in accounting for the variability in the dependent variable, there may be other variables affecting QFS. The model overall is significant according to the F-statistic (32.39913) and associated p-value (0.0000). The Durbin-Watson statistic (2.041403) also indicates the robustness of the model by pointing towards no major autocorrelation in the residuals.

**Table 3: Augmented Dickey-Fuller Test Statistic**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | t-Statistic |   Prob.\* |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller test statistic | -6.497476 |  0.0000 |
| Test critical values: | 1% level |  | -3.447259 |  |
|  | 5% level |  | -2.868888 |  |
|  | 10% level |  | -2.570751 |  |
|  |  |  |  |  |
|  |  |  |  |  |
| \*MacKinnon (1996) one-sided p-values. |  |
| Augmented Dickey-Fuller Test Equation |  |
| Dependent Variable: D(QFS) |  |  |
| Method: Least Squares |  |  |
| Date: 03/16/25 Time: 04:48 |  |  |
| Sample (adjusted): 10 391 |  |  |
| Included observations: 382 after adjustments |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob.   |
|  |  |  |  |  |
|  |  |  |  |  |
| QFS(-1) | -0.795169 | 0.122381 | -6.497476 | 0.0000 |
| D(QFS(-1)) | 0.187609 | 0.112091 | 1.673723 | 0.0950 |
| D(QFS(-2)) | -0.056129 | 0.104912 | -0.535008 | 0.5930 |
| D(QFS(-3)) | 0.163383 | 0.094116 | 1.735979 | 0.0834 |
| D(QFS(-4)) | 0.072051 | 0.089325 | 0.806616 | 0.4204 |
| D(QFS(-5)) | 0.206838 | 0.081060 | 2.551667 | 0.0111 |
| D(QFS(-6)) | -0.098422 | 0.074832 | -1.315236 | 0.1892 |
| D(QFS(-7)) | 0.013790 | 0.059982 | 0.229896 | 0.8183 |
| D(QFS(-8)) | -0.172660 | 0.050934 | -3.389865 | 0.0008 |
| C | 2.786752 | 0.428842 | 6.498324 | 0.0000 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.439392 |     Mean dependent var | 0.001309 |
| Adjusted R-squared | 0.425829 |     S.D. dependent var | 0.349663 |
| S.E. of regression | 0.264954 |     Akaike info criterion | 0.207308 |
| Sum squared resid | 26.11463 |     Schwarz criterion | 0.310591 |
| Log likelihood | -29.59583 |     Hannan-Quinn criter. | 0.248283 |
| F-statistic | 32.39613 |     Durbin-Watson stat | 2.041403 |
| Prob(F-statistic) | 0.000000 |  |  |  |
|  |  |  |  |  |
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**4.4 Discussions**

The constant term in the model is 2.778339 with a z-statistic of 17.43407 and a p-value of 0.0000. The highly significant result (p-value < 0.01) indicates that the constant term is statistically significant in explaining the quality of financial statement. This suggests that, when all other factors are held constant, the baseline value of the quality of financial statement is significantly positive. The coefficient for management risk control is -0.070720, with a z-statistic of -1.435012 and a p-value of 0.1513. The p-value greater than the 0.05 threshold suggests that this variable is not statistically significant at the 5% level. This implies that management's risk control measures, in this model, do not significantly impact the dependent variable. The negative coefficient suggests that, if significant, better management risk control would likely reduce the value of the dependent variable. The coefficient for environmental risk is 0.329022 with a z-statistic of 6.030355 and a p-value of 0.0000. The p-value is highly significant which indicates a strong positive relationship between environmental risk and the quality of financial statement. This suggests that higher environmental risk significantly increases the quality of financial statement, and it is one of the key drivers in the model. The coefficient for risk control techniques is -0.045752, with a z-statistic of -1.221172 and a p-value of 0.2220. Similar to the management of risk control, this variable is not statistically significant at the 5% level. The negative sign of the coefficient indicates that, if significant, increased control from techniques would decrease the dependent variable, but the p-value suggests that this result is not reliable. **Management risk control** previous studies suggested that management risk control is essential in reducing organizational risk, but this study shows that it may not have a significant direct impact in this particular context which reflects the complexity of risk control measures in real-world scenarios or that the method used to measure management control did not fully capture its impact. Environmental risk has been found in various studies (Falana et al., 202; Ahadzadeh & Vakilifard (2025) to have a significant impact on business performance, particularly in industries sensitive to regulatory or environmental changes. The strong positive coefficient here supports the idea that environmental factors are crucial drivers of the dependent variable, aligning with established research in environmental risk management. However, these findings contradicted the findings in the study of Omonori and Ayegbo (2025), as riskcontroltechniquesthe importance of risk management techniques in mitigating risk. However, this study shows that the techniques' control is not statistically significant, which could be due to ineffective and poorly implemented risk management techniques in the studied sample.

**Conclusion**

The findings of this study concluded that environmental risk is the most significant factor affecting the quality of financial statements. Both management risk control and risk control techniques show no significant impact, suggesting that other factors not included in this study play a more crucial role in determining the outcome because the constant term is significant, indicating a solid baseline, but the non-significance of some key variables highlights the complexity of the issue at hand.

**Recommendations**

The study indicated that:

1. Organizations should make the management of environmental risks a top priority, perhaps through more effective environmental risk management tools and measures.
2. There is a need for a review of management risk control procedures to assess other ways to improve management's role in minimizing risk in order to better know the determinants of the quality of financial statement.
3. There also needs to be a re-evaluation of the risk management strategies that will be studying how the strategies are implemented and if different strategies would be more successful in driving the outcome.

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