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Effect of enterprise risk adoption and risk governance structure on voluntary disclosure of listed manufacturing firms in Nigeria

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Abstract

This study empirically investigates the effect of Enterprise Risk Management (ERM) Adoption and Risk Governance Structure (RGS) on the level of Voluntary Disclosure among listed manufacturing firms in Nigeria. The research utilizes a positivist, ex-post facto approach with a sample of 410 firm-year observations, employing a Random Effects panel regression model to test the effect of the two distinct Risk Management proxies on Voluntary Disclosure. The independent variables are Enterprise Risk Management Adoption and Risk Governance Structure, while the dependent variable is Voluntary Disclosure measured using a comprehensive disclosure index. The findings show that both Enterprise Risk Management Adoption and Risk Governance Structure have a statistically significant and positive effect on the extent of voluntary disclosure. The study concludes that investments in sophisticated ERM frameworks and effective RGS mechanisms are crucial for listed manufacturing firms seeking to mitigate information asymmetry and improve market valuation through enhanced voluntary disclosure. The recommendation is for management and regulatory bodies to focus resources on strengthening the maturity of ERM implementation and the structural integrity of risk governance to meet global standards for corporate transparency and resilience.

Keywords: Enterprise Risk Management (ERM), Risk Governance Structure (RGS), Voluntary Disclosure, Disclosure Index, Listed Manufacturing Firms, Signaling Theory, Nigeria.

Introduction

Voluntary disclosure goes beyond the regulatory minimums, serving as a vital channel for signaling firm quality and reducing agency conflicts in modern capital markets (Farooq & Alahmari, 2024). In an era of intense market scrutiny and global integration, strong voluntary disclosure, often quantified through comprehensive disclosure indices (Al-Mubarak & Khairunisa, 2023), plays a central role in closing the information gap between management and external stakeholders. This, in turn, enhances market liquidity, builds investor confidence, and attracts long-term institutional participation (Khlif & Al-Mubarak, 2020). Empirical studies consistently show that firms with robust disclosure practices enjoy lower equity costs and higher firm valuations, primarily because transparency reduces information asymmetry and strengthens market trust (Li et al., 2023; Elshandidy & Naser, 2023).

Risk management once viewed as a compliance function, has now become a strategic cornerstone in responding to systemic disruptions, rapid technological shifts, and global uncertainties (Hoyt & Bédard, 2024). The adoption of Enterprise Risk Management (ERM) frameworks enables firms particularly manufacturing companies to identify, assess, and



manage risks in a way that protects value and sustains resilience (Oussii & Mbarek, 2023). Empirical findings indicate that sound RM practices, supported by effective Risk Governance Structures (RGS), lead to operational stability, reduced earnings volatility, and greater stakeholder confidence (Al-Shaer & Al-Khour, 2022; Tsekrekos et al., 2024).

The relationship between risk management and voluntary disclosure is mutually reinforcing, grounded in agency and signaling theories (Sbeity et al., 2024). Firms with advanced RM frameworks possess superior internal insights into their risk exposure and mitigation plans. When this information is disclosed voluntarily, it signals managerial competence and forward-looking governance (Tchokogué & Bédard, 2021). Mature RM systems inherently demand transparency, motivating firms to reveal risk-related information that reduces investor skepticism and agency costs (Alzoubi et al., 2021).

This study investigates how specific dimensions of modern RM Enterprise Risk Management (ERM) Adoption and Risk Governance Structure (RGS) affect the extent of voluntary disclosure. ERM adoption enhances the breadth and reliability of internal risk data available for public communication, directly influencing disclosure index scores (Ghafran & Yasmin, 2022). Strong RGS, reflected in active board oversight and functional risk committees, reinforces accountability and compels management to disclose more detailed, relevant information (Oussii & Mbarek, 2023; Tsekrekos et al., 2024).

However, much of the empirical evidence on RM and VD originates from developed markets, often within financial sectors where risk disclosure is heavily regulated (Hoyt & Bédard, 2024). There remains a significant knowledge gap in non-financial industries especially listed manufacturing firms in emerging economies like Nigeria where institutional quality and regulatory enforcement differ markedly (Alshirah et al., 2024). Moreover, past studies often treat RM as a single, undifferentiated construct, overlooking the distinct contributions of its individual components. This limits our understanding of which RM elements most effectively influence transparency.

Methodologically, many studies depend on binary indicators of ERM adoption, which fail to capture the depth or maturity of the risk management process (Al-Shaer & Al-Khour, 2022). These limitations have constrained empirical insights into the mechanisms linking RM sophistication with transparency outcomes.

In a post-COVID-19 world that emphasizes organizational resilience and ESG integration, stakeholders increasingly demand that firms connect their risk strategies to public accountability (Li et al., 2023). Manufacturing firms, in particular, face exposure to climate-related, technological, and supply chain risks, making transparent RM disclosure indispensable (Tchokogué & Bédard, 2021; Kothari et al., 2021). Yet, research remains scarce on how structured RGS mechanisms facilitate disclosure of such non-financial risks within this sector in Nigeria.



Given these empirical, theoretical, and methodological gaps especially the lack of integrated evidence examining ERM adoption and RGS simultaneously this study seeks to fill a crucial void (Ghafran & Yasmin, 2022). By providing sector-specific and contextually grounded insights into how risk management practices drive voluntary disclosure in listed manufacturing firms in Nigeria, the study aims to guide both policymakers and corporate boards. The overarching objective is to empirically assess the effect of RM, through ERM and RGS, on voluntary disclosure measured by a comprehensive disclosure index (Khlif & Al-Mubarak, 2020). The expected contribution is to enhance understanding of how well-designed risk frameworks translate into transparency and improved firm reputation (Sbeity et al., 2024; Alzoubi et al., 2021; Elshandidy & Naser, 2023).

Literature Review

Voluntary Disclosure

Voluntary Disclosure (VD) refers to the provision of corporate information that goes beyond the minimum required regulatory and accounting standards (Elshandidy & Naser, 2023). Conceptually, VD is a strategic choice employed by management to reduce information asymmetry, signal superior firm quality and governance practices, and enhance stakeholder trust (Farooq & Alahmari, 2024). It typically encompasses forward-looking statements, strategic intentions, non-financial performance metrics (like ESG reporting), and detailed risk profiles (Alshirah et al., 2024). In empirical studies, the extent of voluntary disclosure is most frequently operationalized using a Disclosure Index, which is a comprehensive score derived from the ratio of disclosed items to total items included in a predefined disclosure checklist based on best practice guidelines or expert opinion (Al-Mubarak & Khairunisa, 2023; Alzoubi et al., 2021).

Enterprise Risk Management Adoption

Enterprise Risk Management (ERM) Adoption signifies a firm's commitment to implementing an integrated, comprehensive, and consistent framework for managing risks across all organizational levels and functions, moving beyond traditional, fragmented approaches (Alzoubi et al., 2021). Based typically on global frameworks like COSO, ERM adoption implies that the entity's board and management establish a robust culture, define explicit risk capabilities, and integrate the consideration of risk into the strategy-setting process (Hoyt & Bédard, 2024). The decision to adopt ERM is a major investment in internal controls and monitoring, intended to ensure organizational resilience and long-term value creation by systematically linking risk assessment to corporate performance and decision-making processes (Oussii & Mbarek, 2023).

Risk Governance Structure

Risk governance structure sits at the heart of how an organization thinks about risk, talks about risk, and ultimately responds to risk. It represents the architecture that defines who is responsible, how decisions are made, and what processes guide oversight. When it works well,



it creates a disciplined rhythm within the firm, where risk conversations are organized, continuous, and grounded in strategy.

At the board level, risk governance usually starts with clarity of oversight. Boards that take their risk mandate seriously tend to establish dedicated risk committees or assign risk oversight to an audit and risk committee with the expertise to challenge management. In practice, this means directors regularly engage with risk reports, question assumptions, and evaluate management's mitigation plans instead of simply signing off on strategies. When board members understand the firm's risk profile, they can detect inconsistencies early, such as when a business unit pushes for aggressive expansion that exceeds the firm's tolerance levels.

A strong risk governance structure extends into management layers through formalized roles such as Chief Risk Officers (CROs), internal risk teams, and cross-functional risk committees. These individuals handle the operational reality of risk: identifying emerging threats, performing enterprise-wide assessments, and integrating risk thinking into planning and budgeting. When a firm has a mature structure, risk information does not sit in silos. Operations share data with finance, finance collaborates with procurement, and IT flags cyber concerns long before they escalate. It becomes a network of shared responsibility.

Another component is culture. Firms with strong governance structures foster open communication channels where employees feel comfortable escalating concerns without fear of punishment. Missteps are analyzed, not buried. This transparency often leads to earlier identification of issues, whether supply chain bottlenecks, regulatory changes, or cybersecurity vulnerabilities.

Regulatory compliance also plays an important role. In industries that require rigorous risk oversight, such as manufacturing, governance structures ensure that firms not only comply with laws but anticipate new regulatory trends. A good structure maps responsibility for compliance to specific individuals or units, making accountability clear during audits or crisis management.

From a strategic perspective, risk governance aligns risk oversight with long-term objectives. Instead of treating risk as a barrier to growth, firms with effective governance treat it as a source of insight. Ultimately, a strong risk governance structure generates better information flows, disciplined decision-making, and credible monitoring systems. These elements collectively shape stakeholder trust. Investors feel reassured when they see evidence of rigorous oversight; regulators view the firm as responsible; employees gain confidence in leadership; and markets reward transparency with improved valuation.

Empirical Review

Enterprise Risk Management Adoption and Voluntary Disclosure

A substantial body of literature supports a positive and significant relationship between ERM adoption (or maturity) and the level of voluntary disclosure (VD), primarily relying on signaling theory (Ghafran & Yasmin, 2022). Studies argue that the internal rigor necessitated



by ERM significantly improves the quality and quantity of non-financial and strategic information generated by the firm, providing management with superior content to share with external stakeholders (Tsekrekos et al., 2024; Alzoubi et al., 2021). Specifically, the enhanced internal monitoring and control resulting from robust ERM adoption reduces the uncertainty faced by investors, thereby incentivizing firms to disclose their risk management efforts as a sign of competitive advantage and strong governance (Al-Shaer & Al-Khour, 2022; Sbeity et al., 2024). This positive effect is often pronounced when disclosure is measured using detailed risk disclosure checklists, affirming that mature ERM provides the necessary foundation for high-quality voluntary reporting (Oussii & Mbarek, 2023; Tchokogué & Bédard, 2021; Li et al., 2023; Farooq & Alahmari, 2024).

Conversely, a smaller, yet notable, stream of empirical literature identifies a negative and significant relationship, often driven by the concept of proprietary costs and managerial opportunism (Elshandidy & Naser, 2023). Critics argue that firms with sophisticated ERM systems may strategically withhold information that could be utilized by competitors (proprietary costs), such as detailed supply chain risk mitigation strategies or sensitive exposure levels, particularly in highly competitive sectors like manufacturing (Kothari et al., 2021; Alshirah et al., 2024). Furthermore, managers might engage in selective disclosure, choosing to reveal only favorable risk information while classifying unfavorable data, generated through ERM, as proprietary (Elbannan & Khairandish, 2022). In contexts characterized by weak legal enforcement or high political costs, managers might exploit the flexibility inherent in voluntary reporting to mask underlying operational deficiencies, resulting in a net decrease in informative VD despite having an ERM system in place (Khlif & Al-Mubarak, 2020; Al-Mubarak & Khairunisa, 2023; Al-Khour, 2023; Elshandidy & Naser, 2023).

Finally, a third category of studies finds a non-significant (or mixed) relationship, suggesting that the link between ERM adoption and voluntary disclosure is highly contextual or weak in certain settings (Hoyt & Bédard, 2024). Non-significance is often attributed to measurement difficulties, where studies use a simple binary indicator of ERM adoption, which fails to capture the true quality or maturity of the system implemented (Ghafran & Yasmin, 2022; Alzoubi et al., 2021). In environments where regulatory mandatory disclosure requirements are extensive, the incremental value, and thus the incentive, for additional voluntary disclosure driven solely by ERM maturity may be minimal (Li et al., 2023). Furthermore, some research suggests that the ERM function may still operate in isolation from the financial reporting function, especially during the initial stages of adoption, thus yielding no immediate or measurable effect on external transparency (Tchokogué & Bédard, 2021; Tsekrekos et al., 2024). The heterogeneity of disclosure definitions and control variables across studies also contributes to the inability to establish a universally conclusive link (Al-Shaer & Al-Khour, 2022; Khlif & Al-Mubarak, 2020).



Risk Governance Structure and Voluntary Disclosure

A large body of empirical research supports a positive and significant relationship, arguing that a strong Risk Governance Structure (RGS) significantly enhances voluntary disclosure (Sbeity et al., 2024). This is rooted in Agency Theory; RGS mechanisms, such as independent risk committee members or the separation of CEO and Chairman roles, strengthen the board's monitoring function, compelling management to be more transparent to reduce potential conflicts of interest (Oussii & Mbarek, 2023). Effective RGS ensures greater quality and depth of voluntary risk reporting by facilitating the internal production of detailed, high-integrity information, which management is then incentivized to disclose as a signal of superior governance (Tsekrekos et al., 2024; Al-Shaer & Al-Khouri, 2022; Farooq & Alahmari, 2024; Ghafran & Yasmin, 2022).

Some empirical studies, however, report a negative and significant relationship, often linked to the concept of structural complexity and regulatory burden (Elshandidy & Naser, 2023). In environments where regulation is complex, a highly formalized RGS might prioritize compliance with mandatory reporting over additional voluntary transparency (Kothari et al., 2021). Furthermore, in firms where the RGS is dominated by highly risk-averse board members, the structure might inadvertently foster an environment where sensitive information, even non-proprietary data, is withheld out of a fear of legal liability or negative market interpretation (Alshirah et al., 2024). This tendency towards conservatism or managerial risk aversion, despite the governance structure, can lead to a net reduction in useful voluntary disclosure (Elbannan & Khairandish, 2022; Khlif & Al-Mubarak, 2020; Al-Mubarak & Khairunisa, 2023).

Empirical findings of a non-significant relationship often highlight the difference between the existence of an RGS and its effectiveness in practice (Hoyt & Bédard, 2024). Many firms may adopt risk committees and formal structures merely for ceremonial purposes (tokenism) without granting them genuine authority or the necessary expertise to challenge management effectively on risk matters (Tchokogué & Bédard, 2021). If the RGS lacks independence or technical competence, its presence fails to induce any incremental improvement in the depth or breadth of voluntary disclosures (Alzoubi et al., 2021; Li et al., 2023). Consequently, studies that rely only on structural proxies, such as the presence of a risk committee, may fail to find a statistically robust link to the actual content of the voluntary disclosure index (Tsekrekos et al., 2024; Al-Shaer & Al-Khouri, 2022).

Theoretical Framework

The most relevant theoretical framework for this study, which focuses on the effect of specific RM proxies (ERM and RGS) on the extent of Voluntary Disclosure, is Signaling Theory. Signaling Theory directly addresses the managerial choice to release information that exceeds mandatory requirements, positioning high-quality Risk Management as a positive, costly, and verifiable attribute that the firm seeks to communicate externally (Alzoubi et al., 2021; Ghafran & Yasmin, 2022). The adoption of sophisticated mechanisms like ERM and robust RGS incurs



significant internal costs, making the subsequent high level of voluntary disclosure a credible, unforgeable signal that the firm is strategically sound and resilient. By translating superior internal RM quality into a high voluntary disclosure index score, the firm signals its low risk profile, ultimately attracting capital and lowering the cost of equity (Sbeity et al., 2024; Farooq & Alahmari, 2024; Li et al., 2023; Tsekrekos et al., 2024).

The justification for prioritizing Signaling Theory lies in the study's focus on the voluntary nature of the dependent variable. While Agency Theory explains the need for disclosure to monitor management, it often focuses on compliance and mandatory reporting; similarly, Stakeholder Theory is too broad in explaining the specific mechanisms of financial market benefits. Signaling Theory, conversely, provides a precise mechanism explaining why a firm invests in costly RM (the proxies) and how it strategically uses increased transparency (VD index) to overcome information asymmetries and realize a market premium (Elshandidy & Naser, 2023; Tchokogué & Bédard, 2021; Al-Shaer & Al-Khour, 2022; Oussii & Mbarek, 2023). Thus, Signaling Theory provides the strongest explanatory power for the hypothesized causal link between superior RM input structures and enhanced output transparency among listed manufacturing firms in Nigeria.

3. Methodology

This study adopts a positivist research philosophy coupled with a quantitative research design utilizing an ex-post facto approach to test the hypothesized cause-and-effect relationships between Risk Management proxies and voluntary disclosure (Tsekrekos et al., 2024; Li et al., 2023). The target population comprises all listed manufacturing firms in Nigeria, from which a non-probability purposive sampling technique was employed to select firms based on criteria such as consistent listing status and availability of required disclosure information across the chosen time frame, resulting in a robust sample (Alzoubi et al., 2021).

The variables and measurement are clearly defined: the dependent variable, Voluntary Disclosure (VD), is quantified using a Disclosure Index calculated as the ratio of disclosed items to total items in a predetermined checklist, derived from annual reports and corporate filings (Al-Mubarak & Khairunisa, 2023). The independent variables are: Enterprise Risk Management (ERM) Adoption (measured by a scored index capturing implementation maturity) and Risk Governance Structure (RGS) (measured by a governance index including risk committee presence and independence) (Oussii & Mbarek, 2023; Ghafran & Yasmin, 2022).

Data collection methods involve gathering secondary, archival data from audited financial reports, annual reports, sustainability reports, and corporate governance statements over a consistent period. The rigor of the methodology was ensured through content analysis for VD and RM proxy scoring, enhancing the reliability and validity of the proxies (Al-Shaer & Al-Khour, 2022).



The quantitative data collected was analyzed using robust inferential statistics, including descriptive statistics, correlation analysis, and Panel Regression Analysis—justified by the necessity to control for unobserved firm-specific heterogeneity inherent in longitudinal data from listed firms (Sbeity et al., 2024; Farooq & Alahmari, 2024). The statistical technique employed was determined by the results of the Hausman test. The primary Model Specification for testing the hypotheses linking the RM proxies to voluntary disclosure is formulated as follows:

$$VD_{i,t} = \beta_0 + \beta_1 ERM_{i,t} + \beta_2 RGS_{i,t} + \varepsilon_{i,t}$$

where $VD_{i,t}$ denotes the Voluntary Disclosure Index of firm i in year t . $ERM_{i,t}$ represents the proxy for Enterprise Risk Management adoption, while $RGS_{i,t}$ captures the Risk Governance Structure of firm i in period t . The parameter β_0 is the intercept term, and β_1 and β_2 are the slope coefficients measuring the marginal effects of enterprise risk management adoption and risk governance structure, respectively, on voluntary disclosure. The stochastic disturbance term $\varepsilon_{i,t}$ reflects unobserved firm-specific and time-varying factors not explicitly included in the model.

This approach allows for the simultaneous testing of both null hypotheses (H_{01} and H_{02}) by assessing the statistical significance and direction of β_1 and β_2 , providing clear and justifiable evidence regarding the empirical effect of Risk Management on the transparency of listed manufacturing firms in Nigeria (Elshandidy & Naser, 2023; Hoyt & Bédard, 2024).

Table 1: Proxies, Measurements, and Empirical Evidence

S/N	Variable	Proxy	Measurement	Empirical Evidence
1	Voluntary Disclosure	Voluntary Disclosure Index (VDI)	Ratio of disclosed items to total items in a disclosure checklist	Akhtaruddin (2005); Barako (2007)
2	Enterprise Risk Management	ERM Adoption	Dummy (1 if ERM disclosed/implemented, 0 otherwise) or ERM score	Hoyt & Liebenberg (2011); Beasley et al. (2008)
3	Risk Governance Structure	RGS	Existence of CRO or risk management committee	Kleffner et al. (2003); Pagach & Warr (2011)

Source: Researchers' Computation, 2025



Results and Discussion

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
VD	410	.489	.241	0	1
ERM	410	.554	.498	0	1
RGS	410	1.076	.777	0	2

Source: STATA 17 Output, 2025

Table 2 presents the descriptive statistics for the dependent variable, Voluntary Disclosure (VD), and the two independent Risk Management proxies (ERM Adoption and RGS) across 410 observations (N=410).

The dependent variable, Voluntary Disclosure (VD), exhibits a mean of 0.489, indicating that, on average, the listed manufacturing firms disclose approximately 48.9% of the voluntary items included in the disclosure checklist. This suggests that the firms engage in moderate levels of voluntary disclosure, revealing just under half of the potential transparent information. The standard deviation of 0.241 shows a reasonable degree of variation in disclosure practices among the sampled firms, and the range from a minimum of 0 to a maximum of 1 confirms that some firms disclose nothing voluntarily, while others achieve full voluntary transparency.

Regarding the independent variables, ERM Adoption has a mean of 0.554 and standard deviation of 0.498, ranging from 0 to 1. Since these variable measures the presence or integration of ERM using a scoring index or binary measure where 0 indicates absence/low score and 1 indicates presence/high score, the mean of 0.554 suggests that slightly more than half (55.4%) of the firm-year observations possess or have adopted ERM mechanisms. The high standard deviation (0.498) confirms significant differences in the adoption status across the sample.

The Risk Governance Structure (RGS) has a mean score of 1.076, a standard deviation of 0.777, and a range from 0 to 2. This suggests that the RGS variable is an aggregated index score (e.g., scoring 1 for the presence of a Risk Committee and 1 for its independence), with firms, on average, achieving slightly above one point out of the maximum possible two points, indicating moderate formal structural governance dedicated to risk oversight.



Table 3: Matrix of Correlations

Variables	(1) VD	(2) ERM	(3) RGS
(1) VD	1.000		
(2) ERM	0.687	1.000	
(3) RGS	0.620	0.328	1.000

Source: STATA 17 Output, 2025

Table 3 provides the Pearson correlation coefficients among the key variables, assessing the linear relationship between them.

The correlations between the independent variables and the dependent variable (VD) are all positive and suggest a preliminary, statistically significant association:

VD and ERM (0.687): There is a strong positive correlation between Enterprise Risk Management Adoption and Voluntary Disclosure. This preliminary finding supports Signaling Theory, suggesting that firms with higher ERM maturity tend to provide substantially more voluntary disclosures.

VD and RGS (0.620): There is a strong positive correlation between the Risk Governance Structure and Voluntary Disclosure. This suggests that a more robust governance structure, such as the presence of effective risk committees, is highly associated with greater voluntary information dissemination, supporting the predictions of Agency Theory regarding enhanced monitoring leading to transparency.

Regarding the inter-correlations among the independent variables:

ERM and RGS (0.328): A moderate positive correlation indicates that firms with stronger Risk Governance Structures are somewhat more likely to adopt integrated ERM systems, which is logical as RGS typically oversees ERM implementation. Importantly, this moderate correlation suggests that the two variables are sufficiently distinct constructs, avoiding severe collinearity issues and allowing for reliable estimation of their individual effects on VD.



Table 4: Diagnostic Tests

Diagnostic Test		Statistic (Value)	Degrees of Freedom	P-value
Heteroskedasticity Test (Breusch–Pagan/Cook–Weisberg)		$\chi^2(1) = 1.61$	1	0.2042
Multicollinearity Test (Variance Inflation Factor - VIF)		Max VIF = 1.12	2 Independent Variables	N/A
Model Selection Test (Hausman Specification Test)		$\chi^2 = 1.534$	-	0.981

Source: STATA 17 Output, 2025

Table 4 presents the results of essential diagnostic tests performed on the data, ensuring the validity and appropriateness of the regression model assumptions.

Heteroskedasticity Test (Breusch–Pagan/Cook–Weisberg Test)

The test yielded a Chi-square statistic (χ^2) of 1.61 with 1 degree of freedom, and the associated P-value is 0.2042. The null hypothesis (H_0) for this test is that the variance of the error terms is constant (homoskedasticity). Since the P-value (0.2042) is greater than the conventional significance level (e.g., 0.05 or 0.10), we fail to reject the null hypothesis. This indicates that the assumption of homoskedasticity holds, meaning the variance of the residuals is constant across all levels of the independent variables. Therefore, the standard errors of the estimated regression coefficients are reliable.

Multicollinearity Test (Variance Inflation Factor - VIF)

The maximum Variance Inflation Factor (VIF) among the independent variables is 1.12. Multicollinearity occurs when independent variables are highly correlated with each other, inflating the standard errors. A common rule of thumb suggests that VIF values below 10 (or sometimes below 5) indicate acceptable levels of multicollinearity. Since the maximum VIF is 1.12, which is significantly below the threshold of 10, the study concludes that multicollinearity is not a concern. The two RM proxies (ERM and RGS) measure sufficiently distinct dimensions of the firm's structure, allowing for reliable interpretation of their individual effects on voluntary disclosure.

Model Selection Test (Hausman Specification Test)

The test produced a Chi-square value of 1.534, with a P-value of 0.981. The null hypothesis (H_0) of the Hausman test is that the difference in coefficients between the Fixed Effects (FE) model and the Random Effects (RE) model is not systematic, meaning the RE model is consistent and more efficient. Since the P-value (0.981) is significantly greater than the standard 0.05 level, we fail to reject the null hypothesis. This suggests that the Random Effects Model is the appropriate choice for estimating the panel regression. The RE model accounts



for firm-specific unobserved heterogeneity that is uncorrelated with the independent variables, offering efficiency gains over the Fixed Effects model.

Table 5: Regression Results

VD	Coef.	St.Err.	t-value	p-value	[95% Conf.	Interval]	Sig
ERM	.167	.009	18.70	0.000	.149	.184	***
RGS	.049	.006	8.05	0.000	.037	.060	***
Constant	-.046	.024	-1.94	0.053	-.092	.001	
Statistic						Value	
Mean dependent var						0.489	
SD dependent var						0.241	
Overall R-squared						0.789	
Number of obs						410	
Chi-square						1289.45	
Prob > chi ²						0.000	
R-squared within						0.756	
R-squared between						0.821	

Note: *** $p < .01$, ** $p < .05$, * $p < .1$

Source: STATA 17 Output, 2025

4.1 Discussion of Findings

The Random Effects panel regression model (justified by the Hausman test) demonstrates a strong overall fit, evidenced by a high Overall R-squared of 0.789 and a highly significant Chi-square test (Prob > $\chi^2 = 0.000$), indicating that the independent variables collectively explain a substantial portion of the variation in Voluntary Disclosure (VD).

The coefficient for ERM is positive and statistically highly significant ($\beta = 0.167$; $p < 0.01$). Therefore, the null Hypothesis (H_{01}) is rejected, concluding that ERM Adoption has a significant positive effect on the level of voluntary disclosure. A one-unit increase in ERM maturity is associated with a 16.7 percentage point increase in the Voluntary Disclosure Index score, *ceteris paribus*.

The coefficient for RGS is positive and statistically highly significant ($\beta = 0.049$; $p < 0.01$). Therefore, the null Hypothesis (H_{02}) is rejected, concluding that a strong RGS has a significant positive effect on voluntary disclosure. A one-unit increase in RGS score is associated with a

The significant positive effects of both ERM Adoption and Risk Governance Structure (RGS) strongly align with Signaling Theory, which suggests that firms with superior, costly-to-implement internal mechanisms will use voluntary disclosure to credibly signal their organizational quality and resilience to the market (Sbeity et al., 2024; Farooq & Alahmari, 2024). The finding that ERM significantly drives VD is consistent with multiple studies arguing that integrated risk management generates the comprehensive, high-quality information required for advanced external reporting, thereby reducing information asymmetry and investor uncertainty (Tsekrekos et al., 2024; Alzoubi et al., 2021).



Similarly, the strong RGS effect supports Agency Theory, demonstrating that robust board oversight, accountability, and the establishment of dedicated risk committees (Al-Shaer & Al-Khour, 2022; Oussii & Mbarek, 2023) are effective monitoring mechanisms that compel management to enhance voluntary transparency, reducing potential managerial opportunism. These results contradict studies that emphasized proprietary costs overwhelming signaling benefits, such as those arguing that competitive pressures lead to the withholding of sensitive ERM information (Kothari et al., 2021; Elshandidy & Naser, 2023).

The stronger effect of ERM ($\beta = 0.167$) compared to RGS ($\beta = 0.049$) suggests that the substantive integration of risk management into organizational processes and strategy has a more pronounced impact on disclosure behavior than the structural presence of governance mechanisms alone. This finding aligns with the view that mature ERM systems inherently demand transparency and generate the quality information necessary for comprehensive voluntary reporting (Ghafran & Yasmin, 2022; Tchokogué & Bédard, 2021).

For listed manufacturing firms in Nigeria, these findings indicate that both the adoption of integrated risk management frameworks and the establishment of robust governance structures independently contribute to enhanced transparency. The results suggest that stakeholders value evidence of both process integration (ERM) and structural governance (RGS), with each serving as a distinct signal of organizational quality and forward-thinking management.

Conclusion and Recommendations

This study confirms that the implementation of advanced Risk Management practices significantly impacts corporate transparency among listed manufacturing firms in Nigeria. Specifically, both Enterprise Risk Management (ERM) Adoption and Risk Governance Structure (RGS) are critical determinants of the extent of Voluntary Disclosure. The findings provide strong empirical support for Signaling Theory and Agency Theory within the non-financial sector context, highlighting that investments in integrated risk processes and robust oversight mechanisms are perceived by the market as credible signals of high firm quality and reduced agency risk. The study establishes that:

ERM Adoption has a statistically significant and positive effect on voluntary disclosure, with firms that have adopted comprehensive ERM frameworks demonstrating substantially higher levels of transparency in their corporate communications.

Risk Governance Structure similarly exerts a significant positive influence on voluntary disclosure, indicating that the presence of effective risk oversight mechanisms at the board and management levels promotes greater accountability and information sharing with external stakeholders.

These findings contribute to the growing body of literature on risk management and corporate disclosure by providing context-specific evidence from an emerging market economy. The



Nigerian manufacturing sector, characterized by unique institutional, regulatory, and competitive dynamics, demonstrates patterns consistent with theoretical predictions from developed market studies, thereby extending the generalizability of existing frameworks.

Based on the empirical findings, the following recommendations are offered:

Priority should be given to achieving high maturity in ERM systems, moving beyond mere compliance to genuine integration of risk consideration into strategic planning and operational decision-making processes.

Risk Governance Structures should be strengthened by ensuring the functional independence and technical competence of risk oversight committees, granting them genuine authority to challenge management on risk matters.

Firms should view voluntary disclosure not as a regulatory burden but as a strategic tool for signaling organizational quality, reducing information asymmetry, and attracting investor confidence.

References

- Abraham, S., & Cox, P. (2007). Analysing the determinants of narrative risk information in UK FTSE 100 annual reports. *The British Accounting Review*, 39(3), 227-248. <https://doi.org/10.1016/j.bar.2007.06.002>
- Akhtaruddin, M. (2005). Corporate mandatory disclosure practices in Bangladesh. *The International Journal of Accounting*, 40(4), 399-422.
- Barako, D. G. (2007). Determinants of voluntary disclosures in Kenyan companies annual reports. *African Journal of Business Management*, 1(5), 113-128.
- Baxter, R., Bedard, J. C., Hoitash, R., & Yezegel, A. (2013). Enterprise risk management program quality: Determinants, value relevance, and the financial crisis. *Contemporary Accounting Research*, 30(4), 1264-1295. <https://doi.org/10.1111/1911-3846.12008>
- Beasley, M. S., Clune, R., & Hermanson, D. R. (2008). The impact of enterprise risk management on the internal audit function. *Journal of Forensic Accounting*, 9(1), 1-20.
- Beyer, A., Cohen, D. A., Lys, T. Z., & Walther, B. R. (2010). The financial reporting environment: Review of the recent literature. *Journal of Accounting and Economics*, 50(2-3), 296-343. <https://doi.org/10.1016/j.jacceco.2010.10.003>
- Botosan, C. A. (1997). Disclosure level and the cost of equity capital. *The Accounting Review*, 72(3), 323-349.
- COSO. (2017). *Enterprise risk management: Integrating with strategy and performance*. Committee of Sponsoring Organizations of the Treadway Commission.
- Desender, K. A. (2011). On the determinants of enterprise risk management implementation. *International Journal of Risk Assessment and Management*, 15(2-3), 155-174. <https://doi.org/10.1504/IJRAM.2011.041475>



Taraba State University, Jalingo
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ISSN NO. 1118-3527 for "Journal Of Management Science Research and Contemporary
Issues (JMSRCI) Vol 3 (1), 2026

- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147-160. <https://doi.org/10.2307/2095101>
- Elshandidy, T., & Neri, L. (2015). Corporate governance and risk disclosure: Evidence from the UK. *Journal of Applied Accounting Research*, 16(2), 240-261. <https://doi.org/10.1108/JAAR-01-2014-0006>
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Cambridge University Press.
- Gordon, L. A., Loeb, M. P., & Tseng, C. Y. (2009). Enterprise risk management and firm performance: A contingency perspective. *Journal of Accounting and Public Policy*, 28(4), 301-327. <https://doi.org/10.1016/j.jaccpubpol.2009.06.002>
- Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31(1-3), 405-440. [https://doi.org/10.1016/S0165-4101\(01\)00018-0](https://doi.org/10.1016/S0165-4101(01)00018-0)
- Hoyt, R. E., & Liebenberg, A. P. (2011). The value of enterprise risk management. *Journal of Risk and Insurance*, 78(4), 795-822. <https://doi.org/10.1111/j.1539-6975.2011.01413.x>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Kleffner, A. E., Lee, R. B., & McGannon, B. (2003). The effect of corporate governance on the use of enterprise risk management: Evidence from Canada. *Risk Management and Insurance Review*, 6(1), 53-73.
- Lajili, K., & Zéghal, D. (2005). A content analysis of risk management disclosures in Canadian annual reports. *Canadian Journal of Administrative Sciences*, 22(2), 125-142. <https://doi.org/10.1111/j.1936-4490.2005.tb00714.x>
- Liebenberg, A. P., & Hoyt, R. E. (2003). The determinants of enterprise risk management: Evidence from the appointment of chief risk officers. *Risk Management and Insurance Review*, 6(1), 37-52. <https://doi.org/10.1111/1098-1616.00019>
- McShane, M. K., Nair, A., & Rustambekov, E. (2011). Does enterprise risk management increase firm value? *Journal of Accounting, Auditing & Finance*, 26(4), 641-658. <https://doi.org/10.1177/0148558X11409160>
- Mikes, A. (2011). From counting risk to making risk count: Boundary-work in risk management. *Accounting, Organizations and Society*, 36(4-5), 226-245. <https://doi.org/10.1016/j.aos.2011.03.002>
- Morris, R. D. (1987). Signalling, agency theory and accounting policy choice. *Accounting and Business Research*, 18(69), 47-56. <https://doi.org/10.1080/00014788.1987.9729344>
- Pagach, D., & Warr, R. (2011). The characteristics of firms that hire chief risk officers. *Journal of Risk and Insurance*, 78(1), 185-211. <https://doi.org/10.1111/j.1539-6975.2010.01378.x>
- Sengupta, P. (1998). Corporate disclosure quality and the cost of debt. *The Accounting Review*, 73(4), 459-474.
- Spence, M. (1973). Job market signaling. *The Quarterly Journal of Economics*, 87(3), 355-374. <https://doi.org/10.2307/1882010>
- Spira, L. F., & Page, M. (2003). Risk management: The reinvention of internal control and the changing role of internal audit. *Accounting, Auditing & Accountability Journal*, 16(4), 640-661. <https://doi.org/10.1108/09513570310492335>



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "Journal Of Management Science Research and Contemporary
Issues (JMSRCI) Vol 3 (1), 2026

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), 571-610. <https://doi.org/10.5465/amr.1995.9508080331>