

# The Effect of Integrated Reporting on Sustainable Performance: Evidence from Financial Indicators

Matthew O. Omotoso (Corresponding author)

Department of Business Administration (Accounting)

National University of Lesotho, Roma, Maseru, Lesotho

Tel: 266-56-414-433 E-mail: matthewomotoso64@gmail.com

Francis A. Oni

Department of Business Administration (Accounting)

National University of Lesotho, Roma, Maseru, Lesotho

Nthoto Rose, Ramalefane

Department of Business Administration (Accounting)

National University of Lesotho, Roma, Maseru, Lesotho

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## Abstract

This study aims to examine the effect of integrated reporting and financial indicators on the sustainability performance of banks within the SADC. Data were collected from annual reports and official stock exchange platforms of banks listed on SADC stock exchanges, from 2019 to 2023. Multiple linear regression analysis was utilized to assess the simultaneous impact of independent variables, including IRQ and selected financial indicators, on the dependent variable, sustainability performance. To ensure the robustness of the regression model, statistical tests such as the variance inflation factor were conducted to detect multicollinearity among the independent variables, and unit root tests were performed to confirm the stationarity of the data series. The regression analysis revealed that higher IRQ scores are significantly associated with enhanced sustainability performance, suggesting that comprehensive and transparent reporting practices positively influence sustainability outcomes. Financial indicators: ROA and market capitalization also showed positive correlations with sustainability

performance, indicating that profitable banks with substantial market presence are better positioned to implement effective sustainability initiatives. Conversely, a negative association was found between WACC and sustainability performance, implying that higher financing costs may hinder banks' ability to invest in sustainable practices. An unexpected negative relationship between COGOV and sustainability performance suggests potential misalignments in governance structures that warrant further investigation. This study provides important guidance for banks in the SADC that are looking to boost their sustainability efforts. By adopting high-quality IR and refining their financial strategies, these banks can enhance transparency, strengthen accountability, and allocate resources more effectively to ESG initiatives.

**Keywords:** Sustainability, Stock exchanges, IRQ, Integrated reporting, Financial metrics, Leverage, SAD

## 1. Introduction

Integrated Reporting (IR) has increasingly become a critical instrument for improving transparency and accountability by consolidating both financial and non-financial information, thus providing stakeholders with comprehensive insights into organizations' strategies, sustainability practices, governance, and performance outcomes (De Villiers & Hsiao, 2021; Pistoni *et al.*, 2022). The growing global emphasis on sustainability, corporate accountability, and stakeholder inclusiveness has enhanced the adoption of Integrated Reporting among firms aiming to prove their obligation to sustainable value creation (Alkaraan & Albitar, 2023). Consequently, researchers have developed frameworks, such as the Integrated Reporting Quality (IRQ) Index, to evaluate and quantify corporate compliance with IR principles across dimensions such as strategic focus and future orientation, connectivity of information, stakeholder inclusiveness, materiality and conciseness, reliability and consistency, governance disclosures, ESG integration, and performance metrics integration (Pistoni *et al.*, 2022; Wilson & Huang, 2024).

In this study, sustainable performance is employed as the dependent variable, represented by an aggregate sustainability score (SUS). This score comprehensively captures essential environmental, social and governance (ESG) practices such as carbon footprint management, energy efficiency, responsible investment, financial inclusion, diversity and inclusion, corporate social responsibility, ethical lending, anti-money laundering, ESG-related remuneration policies, and ethical screening. These indicators provide valuable insights into banks' alignment with ESG frameworks and stakeholder expectations (Wilson & Huang, 2024). Conversely, the study incorporates several critical independent variables including Integrated Reporting disclosure scores and financial performance indicators respectively (Rodrigues & Mendes, 2023). Additionally, financial dimensions like the weighted average cost of capital (WACC) and market capitalization, which represent the cost-effectiveness of capital management and investor perceptions of value, are included as independent factors (Alkaraan & Albitar, 2023). Moreover, corporate governance structures and strategic financial investments (SFI) are assessed to determine their influence on banks'

sustainability-oriented decision-making and the strategic alignment of financial performance with ESG objectives (Wilson & Huang, 2024).

This study specifically focuses on listed banks in stock exchanges within the Southern African region due to their distinct strategic importance in financial intermediation and eco-friendly economic growth sustainable economic development. Banks within this region often face unique sustainability and financial reporting challenges and opportunities, shaped by varying regulatory frameworks, stakeholder expectations, and governance practices (Kumah & Mensah, 2021). Compared to other African stock exchanges, Southern African Development Committee (SADC) exchanges, particularly the Johannesburg Stock Exchange (JSE) and the Botswana Stock Exchange, are recognized for more robust regulatory frameworks, higher transparency standards, and advanced corporate governance regulations, which create an ideal setting for examining the effectiveness of Integrated Reporting practices (Moyo *et al.*, 2023). Moreover, banks listed in these exchanges typically operate under stringent regulatory compliance, making them suitable subjects for assessing the quality and implications of integrated reporting (Wilson & Huang, 2024). Furthermore, the selection of SADC banks enables valuable comparisons within a region characterized by both financial interconnectedness and regulatory heterogeneity, providing a rich context to analyze Integrated Reporting's effectiveness in driving sustainable corporate practices through financial indicators.

Despite the increasing global adoption of IR, the extent to which it effectively enhances sustainability performance, particularly in emerging markets, remains under-explored. Existing literature predominantly focuses on developed markets, leaving a critical knowledge gap regarding the applicability and effectiveness of IR in financial institutions within developing economies such as the SADC region. Furthermore, limited empirical evidence exists on how financial indicators like return on assets (ROA), Tobin's Q, gearing, WACC, market capitalization, corporate governance structures, and strategic financial investment (SFI) mediate the relationship between Integrated Reporting disclosure and sustainable performance. Therefore, policymakers, investors, and corporate managers face uncertainty about the tangible financial and sustainability-related benefits of adopting high-quality IR practices. This study addresses these gaps by empirically evaluating how Integrated Reporting influences sustainability outcomes through specific financial indicators among listed banks within the SADC region. Consequently, the findings of this study promise significant policy implications and valuable insights for regulators, investors, and academics regarding Integrated Reporting's contribution to sustainable corporate performance and stakeholder value creation in developing economies (Alkaraan & Albitar, 2023; Rodrigues & Mendes, 2023).

The study examined a total of 39 listed banks from various stock exchanges within the SADC region as of March 2025. The data regarding these banks was systematically sourced from official websites of the respective stock exchanges and further validated through cross-referencing with information from the central banks in each country. To address the study's objective, the research employs various statistical approaches, namely descriptive statistics, Pearson correlation coefficient, variance inflation factor (VIF), unit root tests, and multiple regression analyses.

The remainder of this paper is structured as follows: Section two presents the theoretical framework underpinning the research, alongside a detailed review of relevant theoretical literature on Integrated Reporting and sustainability performance. Section three critically analyzes empirical literature related to the relationship between IR quality, financial indicators, and sustainable performance, identifying key empirical findings and existing research gaps. Section four outlines the research methodology, including research design, population and sample size, data collection procedures, model specification, and analytical techniques employed. Section five presents the empirical results, followed by an extensive discussion and interpretation of the findings in section six, integrating these findings within the theoretical framework adopted. Lastly, section seven provides conclusions drawn from the study, offering practical recommendations and implications for policymakers, managers, and further research opportunities.

## **2. Theoretical Framework and Literature Review**

### *2.1 Theoretical Framework*

This study is anchored on a multidimensional theoretical framework, encompassing Legitimacy Theory, Stakeholder Theory, Resource-Based View (RBV), Signaling Theory, Agency Theory, and Capital Structure Theories, to investigate the effect of integrated reporting on sustainable performance. Collectively, these theories provide diverse but complementary perspectives, offering deep insights into organizational disclosure practices, stakeholder interactions, resource optimization, strategic communication, governance effectiveness, and financial structuring. By integrating these theoretical lenses, the research establishes a robust conceptual basis for exploring how integrated reporting influences sustainability outcomes within the banking sector. This section will discuss each theory in detail, highlighting their unique contributions and implications in understanding the relationships examined in this study.

**Legitimacy Theory:** Legitimacy theory, originally articulated by Suchman (1995), posits that organizations disclose information to demonstrate conformity with societal norms and expectations, thus earning legitimacy from stakeholders. Contemporary studies (De Villiers & Hsiao, 2021; Pistoni *et al.* 2022) indicate that firms increasingly adopt Integrated Reporting (IR) as a strategic approach to signal their commitment to sustainability and transparency. Through enhanced IR disclosures, banks potentially improve their perceived legitimacy, positively impacting their sustainability performance as captured through ESG metrics.

**Stakeholder Theory:** Stakeholder theory emphasizes the necessity for organizations to recognize, balance, and respond to diverse stakeholder interests, including shareholders, customers, regulators, and the broader community, to achieve sustainable value creation (Freeman, 1984; Rodrigues & Mendes, 2023). Integrated Reporting aligns closely with this perspective, as comprehensive disclosures address stakeholder information needs, facilitating stronger stakeholder relationships. From this viewpoint, IR disclosure scores, corporate governance practices, and strategic financial investments (measured via net cash flow relative

to revenue) serve as mechanisms through which banks actively engage stakeholders and enhance sustainability performance.

**Resource-Based View (RBV):** Originating from Barney (1991), the Resource-Based View (RBV) suggests that firms can achieve sustainable competitive advantage by effectively managing their internal resources and capabilities. Recent research (Serafeim & Grewal, 2022; Alkaraan & Albitar, 2023) applies RBV to explain how financial resources, reflected in financial indicators such as ROA, Tobin's Q, and market capitalization, influence an organization's ability to pursue sustainability-oriented strategies. Banks that effectively leverage their internal resources, demonstrated through stronger financial metrics, are better positioned to invest strategically in sustainability initiatives, improving their overall ESG performance.

**Signaling Theory:** Signaling theory, first introduced by Spence (1973), suggests that companies purposefully disclose information to reduce information asymmetry and send positive signals to stakeholders, including investors and regulators. In recent studies, this theory has been employed to explain corporate motivation behind voluntary sustainability disclosures (Rodrigues & Mendes, 2023; Kumah & Mensah, 2021). Higher Integrated Reporting quality can act as a positive signal of responsible management, solid governance, and commitment to sustainability, thereby enhancing investor perceptions, market valuations (Tobin's Q, market capitalization), and reducing capital costs WACC.

**Agency Theory:** Agency theory, developed by Jensen and Meckling (1976), addresses conflicts arising from differing interests between shareholders (principals) and management (agents). In the context of sustainability reporting, recent scholarship (Wilson & Huang, 2024; Alkaraan & Albitar, 2023) applies agency theory to examine how enhanced governance structures and transparent reporting mitigate agency conflicts by aligning managerial decisions with shareholders' sustainability interests. IR disclosure reduces information asymmetry, aligning managerial actions closely with long-term sustainability goals, thus positively impacting ESG outcomes.

**Capital Structure Theories:** Capital structure theories, including Trade-off theory (Modigliani & Miller, 1963) and Pecking Order theory (Myers & Majluf, 1984), provide theoretical grounding for understanding the relationship between banks' capital structures (gearing) and sustainability performance. The Trade-off theory proposes that firms balance debt and equity strategically to optimize their capital cost and enhance firm value, suggesting that high leverage (gearing) may constrain sustainability investments. Conversely, Pecking Order theory emphasizes the preference for internal financing, implying that banks generating higher internal profits ROA possess greater flexibility to fund sustainability initiatives. These theories collectively help in explaining how financial structure decisions influence sustainable corporate practices. The integration of these theoretical perspectives establishes a comprehensive foundation to effectively examine how integrated reporting influences sustainable performance, providing clarity and coherence for interpreting the empirical findings of this study.

## 2.2 Literature Review

The literature review for this study aims to critically analyze the scope, conceptual dimensions, historical evolution, and regulatory frameworks underpinning IR, while contextualizing its influence on sustainable performance as measured by financial indicators. IR expands traditional corporate disclosure by integrating ESG elements, enabling firms to clearly communicate their strategic approach towards long-term sustainability and stakeholder value creation. Recent studies emphasize that IR significantly enhances corporate transparency, accountability, and stakeholder engagement, effectively bridging communication gaps between organizations and their diverse stakeholders (De Villiers & Hsiao, 2021; Wilson & Huang, 2024; Pistoni, 2022).

Conceptually, integrated reporting is described as a concise, strategic approach to corporate disclosure, articulating how an organization's governance structures, strategies, performance metrics, and future prospects collectively drive sustainable value creation (International Integrated Reporting Council (IIRC), (2021). Sustainable performance, a core focus of IR, encompasses the continuous delivery of economic, environmental, and social value, measured through established ESG criteria. Financial indicators, such as ROA, Tobin's Q, market capitalization, financial leverage, and WACC, serve as essential tools for quantifying and evaluating the sustainability-related financial health of firms, offering crucial insights into profitability, market valuation, and strategic financial positioning (Rodrigues & Mendes, 2023; Alkaraan & Albitar, 2023).

Integrated reporting has evolved significantly since its formal inception in 2013, driven initially by the establishment of the IIRC. Recent advancements indicate that IR has transitioned from voluntary adoption towards regulatory recognition and mandatory implementation in several jurisdictions (Pistoni *et al.*, 2022; De Villiers & Hsiao, 2021). Over the last five years, IR has increasingly gained global prominence, supported by empirical evidence demonstrating its role in improving corporate transparency, stakeholder confidence, and sustainability management, especially in the aftermath of global disruptions like the COVID-19 pandemic (Wilson & Huang, 2024). Recent scholarly discussions highlight this evolution as reflective of stakeholders' growing demands for comprehensive disclosure of sustainability impacts, risk management, and governance practices, underscoring IR's crucial role in sustainable corporate communication (Kumah & Mensah, 2021; Mokoaleli-Mokoteli., 2023).

The effectiveness and widespread adoption of IR significantly depend on regulatory frameworks across jurisdictions. Notably, key regulations such as the European Union's Non-Financial Reporting Directive (NFRD), (2014) the Corporate Sustainability Reporting Directive (CSRD), (2022) and various stock exchange listing requirements globally have mandated or strongly encouraged IR adoption to enhance corporate transparency (Pistoni *et al.*, 2022; Mokoaleli-Mokoteli *et al.*, 2023). Within the African context, particularly in the SADC, integrated reporting adoption has been influenced by regulatory actions, such as JSE listing requirements, which have been pivotal in mandating integrated reporting standards and guiding corporate disclosure practices towards sustainability (Kumah & Mensah, 2021;



Wilson & Huang, 2024). These regulatory influences underscore the integral role that policy frameworks play in shaping IR practices, thereby significantly influencing organizations' sustainable performance and financial strategies. This comprehensive review underscores the importance of integrated reporting as an evolving and influential mechanism for enhancing sustainability performance and corporate transparency, highlighting its critical role within contemporary corporate governance and financial management discourse.

This section has critically reviewed the literature on integrated reporting, exploring its conceptual scope, definitions, evolution, and the regulatory frameworks shaping its adoption and effectiveness. The discussions have illustrated integrated reporting's critical role in enhancing corporate sustainability performance, stakeholder engagement, and financial transparency within contemporary corporate governance practices. The next section presents a detailed empirical review, analyzing recent empirical studies on the relationship between integrated reporting practices and sustainable performance, with particular emphasis on findings from financial indicators within various institutional contexts.

### *2.3 Empirical Review*

Several recent empirical studies have investigated the relationship between integrated reporting (IR) and sustainability performance, measured through ESG (Environmental, Social, and Governance) indices, providing valuable insights into this emerging area of corporate disclosure. De Villiers and Hsiao (2021), utilizing panel data from listed companies across various industries, employed content analysis alongside regression analysis to examine how the quality of integrated reporting disclosures affects corporate ESG scores. The findings indicated a significant positive relationship, demonstrating that enhanced IR practices are directly associated with improved ESG performance. The authors recommend firms focus strategically on aligning IR disclosures with measurable ESG outcomes to optimize sustainable value creation.

Similarly, Pistoni *et al.* (2022) analyzed cross-sectional data from European listed firms, using a systematic literature review combined with multiple regression analysis, to evaluate how integrated reporting impacts ESG scores, particularly in the governance domain. Their results showed that companies engaging in detailed, high-quality integrated reporting exhibit substantially higher governance scores compared to those adopting less rigorous reporting standards. Their study underscores the necessity for regulators and corporate managers to prioritize governance disclosures in IR, which can significantly enhance corporate transparency and accountability.

In a recent analysis focused on emerging markets, Rodrigues and Mendes (2023) utilized a dataset comprising listed companies from several developing countries, employing a mixed-method approach involving quantitative panel regressions and qualitative comparative analysis (QCA). The statistical analyses highlighted that integrated reporting quality significantly correlates with superior environmental and social performance indicators. Their findings suggest that robust IR disclosures serve as an effective communication strategy for firms aiming to improve market perceptions regarding their environmental and social

initiatives. They further recommended policymakers encourage standardized IR practices to ensure consistency and comparability of ESG disclosures.

Alkaraan and Albitar (2023) examined data from publicly listed companies in emerging economies, utilizing structural equation modeling (SEM) to explore the mediating effects of corporate governance on the IR–ESG relationship. Their analysis revealed significant indirect effects of integrated reporting on overall ESG scores, mediated through governance structures. They concluded that firms adopting comprehensive IR practices enhance their governance mechanisms, subsequently improving their ESG scores. The study strongly recommends reinforcing corporate governance practices within IR frameworks to achieve better sustainability outcomes.

Wilson and Huang (2024) conducted a comparative panel data analysis of financial institutions across post-COVID economies, employing dynamic panel regression techniques (Generalized Method of Moments - GMM). Their results confirmed a positive relationship between high-quality integrated reporting and improved ESG indices, emphasizing how firms employing rigorous IR practices exhibited stronger ESG performance during financial disruptions. They advocated for regulatory frameworks promoting consistent IR adoption to bolster financial resilience and stakeholder trust in crisis contexts.

Within the African context, Kumah and Mensah (2021) evaluated data from financial institutions across several African countries through descriptive statistics and regression analyses. Their findings identified considerable inconsistencies in IR practices, adversely affecting ESG performance comparability across firms. They emphasized that regulatory harmonization is urgently required to standardize integrated reporting, facilitating meaningful comparisons and stronger ESG outcomes.

Mokoaleli-Mokoteli *et al.* (2023) employed longitudinal data from listed firms within the SADC region, using mixed-effect panel regression methods, to explore the impact of integrated reporting frameworks on ESG performance. Their empirical findings indicated that firms adhering to standardized integrated reporting guidelines consistently achieved higher ESG scores. They concluded that regulatory authorities in emerging economies should mandate or strongly recommend integrated reporting guidelines to enhance corporate sustainability accountability and ESG outcomes effectively.

Serafeim and Grewal (2022) analyzed global data comprising listed firms from emerging economies, adopting robust panel regression and correlation analysis. Their empirical results indicated a strong, positive correlation between integrated reporting adoption and superior ESG scores, particularly in environmental management and governance practices. They recommended that firms view integrated reporting as a strategic tool, supporting their sustainability initiatives and enhancing their competitive positioning within international markets.

Recent empirical studies examining the relationship between integrated reporting (IR) and financial performance, particularly Return on Assets (ROA), have presented varied perspectives and conclusions. Several authors provided evidence strongly supporting a positive



impact of integrated reporting on ROA. For instance, Kılıç and Kuzey (2020), analyzing listed Turkish firms through panel regression techniques, found significant positive correlations, suggesting that enhanced IR disclosure facilitates better ESG performance, leading to improved financial profitability. Similarly, De Villiers and Hsiao (2021) corroborated these findings in a multinational context, confirming a robust positive relationship between detailed IR practices, elevated ESG scores, and subsequent improvement in ROA, highlighting IR as essential for operational efficiency and value creation.

Ching *et al.* (2021) also identified a positive association in Brazilian firms, concluding that comprehensive IR significantly strengthens financial outcomes by enhancing resource allocation and market perception. Further, Baboukardos and Rimmel (2022), examining European listed companies, demonstrated that organizations adopting IR consistently outperform their peers in financial terms, explicitly in ROA, recommending that firms integrate robust IR practices strategically to optimize financial returns. Rodrigues and Mendes (2023) similarly reported positive financial impacts of integrated reporting in emerging markets, emphasizing IR's capability to improve ESG performance and corporate valuation simultaneously, thereby enhancing profitability metrics like ROA.

Supporting these findings, Alkaraan and Albitar (2023) highlighted a direct and indirect positive relationship through improved corporate governance practices linked to integrated reporting. Their structural equation modeling analysis demonstrated that high-quality IR disclosures contribute significantly to higher ROA by enhancing governance effectiveness and operational transparency. Likewise, Wilson and Huang (2024) provided robust evidence that rigorous integrated reporting practices in financial institutions significantly improve ESG performance and financial resilience, explicitly translating into higher ROA, particularly during financial instability.

On the other hand, a few studies presented more nuanced or indifferent conclusions regarding the impact of IR on ROA. Ahmad *et al.* (2024), for example, provided mixed evidence from Asian stock markets, indicating that while IR could reduce information asymmetry, the direct link to improved ROA was somewhat weaker, suggesting context-specific influences and conditional relationships dependent on institutional and economic conditions.

It is noteworthy that the reviewed literature predominantly supports a positive relationship, although context and methodological differences influence the degree of these associations. The general consensus across these empirical studies, however, points toward integrated reporting serving as a valuable strategic instrument capable of enhancing corporate financial performance, particularly measured by ROA, by improving organizational transparency, ESG practices, and stakeholder trust.

Recent empirical studies have extensively analyzed the implications of integrated reporting (IR) on various financial indicators such as Tobin's Q, leverage (financial gearing), corporate governance, market capitalization, strategic financial investments, and the WACC, particularly through the lens of ESG.

Regarding Tobin's Q, Serafeim and Grewal (2022) examined a comprehensive dataset of emerging market firms using panel regression techniques. Their findings indicated a significant positive correlation between integrated reporting quality and Tobin's Q, suggesting that high-quality IR significantly enhances market valuation. They concluded that integrated disclosures effectively signal firms' strategic alignment towards sustainability, thereby enhancing investor confidence. The authors recommended adopting IR as a strategic communication mechanism to optimize firm valuation. In a related study, Rodrigues and Mendes (2023) investigated emerging market companies by employing a mixed-methods approach including quantitative panel data analysis and correlation tests. They observed that companies consistently publishing detailed IR disclosures tend to exhibit improved market valuation reflected by increased Tobin's Q scores, driven by enhanced transparency and stakeholder engagement. Their findings recommended standardizing integrated reporting practices to bolster firms' market performance.

In terms of leverage, Kılıç and Kuzey (2020) used a panel dataset of Turkish listed firms and employed regression analysis, identifying a negative relationship between robust IR practices and financial leverage. Their analysis showed that transparent integrated reporting reduces firms' dependence on external debt due to increased investor confidence and more efficient resource management. They recommended firms adopt comprehensive IR to improve their capital structures. Supporting this viewpoint, Baboukardos and Rimmel (2022), studying European firms through quantitative panel regressions, found that firms adopting detailed integrated reporting exhibited lower leverage ratios. The authors argued that effective IR reduces perceived risk among investors, thereby facilitating access to equity financing rather than debt. They recommended that policymakers advocate for IR to optimize corporate leverage ratios strategically.

On corporate governance, the research conducted by Alkaraan and Albitar (2023) analyzed data from emerging market companies using structural equation modeling (SEM). They demonstrated that integrated reporting positively influences corporate governance by enhancing board accountability and transparency, subsequently elevating ESG scores. They recommended companies enhance governance disclosures within IR practices, resulting in improved ESG outcomes and corporate sustainability. Wilson and Huang (2024), using data from financial institutions post-COVID-19, employed dynamic panel regression analysis (Generalized Method of Moments - GMM) and found that rigorous IR practices positively impacted corporate governance structures, significantly improving ESG indices and investor perceptions. Their recommendations centered on strengthening IR disclosure standards to enhance governance effectiveness, financial stability, and investor trust during periods of economic uncertainty.

Concerning market capitalization, Ching *et al.* (2021) analyzed Brazilian listed firms via longitudinal regression analyses, demonstrating that organizations with strong integrated reporting frameworks achieved substantial increases in market capitalization. Their findings highlighted that transparent and strategic IR disclosures effectively signal corporate sustainability commitment, thereby positively influencing investors' valuation of firms. The authors recommended companies strategically embed IR within their sustainability

communications to enhance market capitalization. Regarding strategic financial investment, Kumah and Mensah (2021) employed regression analysis on African financial institutions' data. They reported that firms practicing comprehensive IR experienced improved financial resource allocation towards sustainable investments, reflected by higher ESG scores. They recommended regulatory measures to mandate IR adoption, thereby optimizing strategic financial investments to enhance corporate sustainability outcomes.

Studies on WACC, including recent research by Ahmad *et al.* (2024), evaluated Asian firms through panel regression methods. They discovered that detailed integrated reporting significantly reduced WACC by diminishing information asymmetry and perceived investor risk, thereby lowering the overall cost of capital. Their recommendations emphasized regulatory support for IR adoption to achieve more favorable financing conditions and sustainable financial outcomes.

The empirical literature reviewed highlights significant evidence supporting the positive impact of integrated reporting (IR) on various dimensions of corporate performance, including ESG-based sustainability scores (SUS), ROA, Tobin's Q, leverage, corporate governance, market capitalization, strategic financial investment, and WACC. Despite this comprehensive coverage, several notable gaps persist in the existing research. Primarily, most studies have concentrated on developed and emerging economies outside the Southern African context, leaving insufficient empirical evidence specifically addressing the impact of integrated reporting on financial indicators and sustainability performance within the SADC region.

Additionally, prior research has largely adopted broad cross-sectoral analyses, with limited attention given explicitly to the banking sector, which uniquely contributes to sustainability through its capital allocation and risk management roles. Furthermore, there is a lack of integrated studies that simultaneously assess the combined influence of IR disclosure quality, financial indicators (such as ROA, Tobin's Q, leverage, and WACC), corporate governance structures, and strategic financial investments on banks' ESG-based sustainability scores. Thus, this research seeks to address these critical literature gaps by providing targeted empirical analysis within the SADC banking sector, offering insights into how integrated reporting specifically influences sustainable performance through key financial and governance indicators.

### **3. Methodology**

#### *3.1 Population and Sample of the Study*

The study analysed a total of 39 listed banks from various stock exchanges within the SADC region, as of March 2025. Specifically, the distribution of the banks includes five from the Botswana Stock Exchange (BSE), six from the Johannesburg Stock Exchange (JSE) in South Africa, and three each from the Namibian Stock Exchange (NSX), Malawi Stock Exchange (MSE), Lusaka Stock Exchange (LuSE) in Zambia, Stock Exchange of Mozambique (BVM), and the Stock Exchange of Mauritius (SEM). Additionally, the Zimbabwe Stock Exchange (ZSE) have seven banks listed, the Dar es Salaam Stock Exchange (DSE) in Tanzania provided

four, and the Eswatini Stock Exchange (ESE) accounted for two banks. Considering the limited and well-defined number of listed banks available in the SADC region, the study utilized a census sampling approach, meaning that all available listed banks meeting the inclusion criteria were considered. This method was adopted due to the manageable population size, eliminating sampling bias and enhancing the generalizability and comprehensiveness of the research findings within the context of listed banks in the SADC region.

### *3.2 Method of Data Collection*

The method of data collection for this study is exclusively based on secondary data, systematically derived from publicly available corporate disclosures, integrated reports, annual financial statements, and supplementary documents issued by listed banks within the Southern African Development Community (SADC) stock exchanges for the period of 2019 to 2023. This rigorous method of data collection ensures the accuracy and reliability of the sample, making the findings representative of the SADC banking sector. Specifically, the computation of sustainability performance scores (SUS) is conducted using ten Environmental, Social, and Governance (ESG) indices: carbon footprint, energy efficiency, responsible investment, financial inclusion, diversity and inclusion, corporate social responsibility, ethical lending, anti-money laundering compliance, ESG-related remuneration, and ethical screening. For each of these ESG indicators, banks are scored dichotomously, assigning "1" if an item is explicitly disclosed and "0" if not disclosed. The overall SUS for each bank is calculated annually as the ratio of disclosed ESG items to the total possible items (ten), multiplied by 100, thus providing a clear, standardized percentage-based ESG score.

Integrated Reporting Quality (IRQ) is evaluated through an index consisting of eight dimensions reflecting compliance with the IIRC framework: strategic focus and future orientation, connectivity of information, stakeholder inclusiveness, materiality and conciseness, reliability and consistency, governance disclosures, ESG integration, and integration of performance metrics and KPIs. Each dimension is assessed through content analysis of the integrated reports and assigned a score from 0 to 5, where "0" indicates non-compliance and "5" represents full compliance. Summation across these dimensions yields the annual IRQ scores for each bank. The total IRQ score is the sum of all eight dimensions (Maximum = 40).

Financial indicators such as ROA, Tobin's Q, financial leverage (gearing), WACC, market capitalization, corporate governance, and SFI (net cash flow/revenue) are meticulously extracted from audited annual financial reports, investor relations materials, and official stock exchange platforms. Market capitalization data are verified through corresponding stock exchanges, while data accuracy is further cross-validated with information from central banks and regulatory bodies across the SADC member states.

### *3.3 Study Variables*

The study employs clearly defined and methodically estimated variables aimed at assessing the effect of IR on sustainable performance among banks listed on stock exchanges within the SADC. The dependent variable in this research is sustainability performance (SUS),

quantitatively measured using ten Environmental, Social, and Governance (ESG) indices. Each ESG index is evaluated dichotomously, assigning a score of '1' if the specific ESG practice is explicitly reported by the bank and '0' otherwise. The sustainability score (SUS) for each bank annually is calculated by summing the disclosed ESG items, dividing by the total number of possible items (ten), and multiplying the result by 100, thus yielding a standardized percentage score indicative of the bank's sustainability disclosure performance. Recent studies have utilized similar methodologies across various ESG indices to calculate sustainability performance scores, highlighting the practical relevance and robustness of multidimensional ESG scoring approaches (e.g., Wilson and Huang (2024); Rodrigues and Mendes (2023); Serafeim and Grewal (2022); Kumah and Mensah (2021)).

The independent variables encompass Integrated Reporting Quality (IRQ) and selected financial indicators. The IRQ is assessed through a structured index comprising eight key dimensions aligned with the IIRC guidelines. Each dimension is evaluated through content analysis of banks' integrated reports, rated on a 0–5 scale, where '0' denotes complete non-compliance and '5' indicates full compliance with IR guidelines. The total IRQ score for each bank is the aggregate of these individual dimension scores, providing a quantitative measure of the quality and depth of integrated reporting practices. Several authors have utilized a multidimensional index approach consistent with the IIRC (2021) framework to assess IRQ. Notably, studies by Pistoni *et al.* (2022), De Villiers and Hsiao (2021), and Wilson and Huang (2024) collectively support the robustness and applicability of this multidimensional IRQ index aligned with IIRC guidelines. The IRQ Index consists of eight key dimensions, each scored on a 0–5 scale (where 0 = Non-compliance, 5 = Full Compliance). The total IRQ score is the sum of all eight dimensions as shown below.

Table 1. IRQ Core Components & Scoring Criteria

Dimension	Description	Scoring Criteria (0–5 Scale)
1. Strategic Focus & Future Orientation	The extent to which the report links strategy, risks, and future outlook to sustainable value creation.	0: No strategic discussion 1-2: Weak link to future outlook 3-4: Moderate integration with long-term sustainability 5: Strong integration with long-term sustainability
2. Connectivity of Information	Degree of integration between financial and non-financial data.	0: No integration 1-2: Fragmented Moderate 3-4: Fully integrated with KPIs 5: Fully integrated with KPIs
3. Stakeholder Inclusiveness	Disclosure of stakeholder engagement, materiality assessment, and responses.	0: No engagement 1-2: Limited discussion 3-4: Moderately covered and interactive 5: Comprehensive and interactive
4. Materiality & Conciseness	Clarity and focus on material issues without excessive length.	0: Irrelevant information 1-2: Some materiality disclosure 3-4: Well-structured 5: Focused and concise
5. Reliability & Consistency	Use of third-party assurance, historical comparisons, and consistency over time.	0: No verification 1-2: Some verification 3-4: Partially assured and comparable 5: Fully assured & comparable



Dimension	Description	Scoring Criteria (0–5 Scale)
6. Governance Disclosures	Quality of corporate governance reporting, including risk management.	0: No governance link 1-2: Weak 3-4: Moderate 5: Strong governance-sustainability connection
7. ESG Integration	Inclusion of environmental, social, and governance (ESG) metrics alongside financial reporting.	0: No ESG data 1-2: Limited 3-4: Partial 5: Full ESG-financial integration
8. Performance Metrics & KPI Integration	Use of financial and non-financial KPIs to measure value creation.	0: No KPI disclosure 1-2: Basic 3-4: Moderate 5: Advanced and well-integrated

Source: Corporate websites of listed firms and IIRC (2021)

Financial indicators used in the study include Return on Assets (ROA), Tobin's Q, financial leverage, corporate governance, natural log of market capitalization (lnMarket capitalization), SFI, and WACC. ROA is calculated by dividing earnings after interest and tax (EAIT) by total assets, capturing the profitability relative to banks' asset bases. Tobin's Q is computed by dividing the market value of the firm by the book value of its total assets, offering insights into the market's perception of banks' sustainability and financial growth potential. Financial leverage (LEV) is measured as total debt divided by total assets, indicating the extent to which banks use debt financing.

Corporate governance (COGOV) is quantified as the ratio of audit committee members with relevant financial expertise to the total audit committee size, reflecting the effectiveness and expertise of corporate oversight. Market capitalization is determined as the natural logarithm of the product of share price and the number of issued shares, indicating overall firm size and investor confidence. SFI is represented by net cash flows generated from operating, investing, and financing activities divided by total revenue, signaling the bank's efficiency in generating and managing financial resources. Finally, The WACC for the banks across the SADC region is proxies using the respective central banks' reference rates within each country. Adopting central bank rates as standardized proxies simplifies the computation process and ensures consistency and comparability of WACC across all financial institutions analyzed. This approach mitigates disparities caused by varying institutional calculation methods, thereby enhancing the accuracy and reliability of cross-country comparisons in assessing investment-related financial performance.

By clearly defining and systematically computing these variables, this study ensures empirical precision, enhances comparability, and robustly assesses the effect of integrated reporting practices on sustainability performance within the banking industry in the SADC region. Several recent empirical studies have utilized similar financial indicators to examine corporate sustainability and financial performance (Ahmad *et al.*, 2024; Alkaraan & Albitar, 2023; Ching *et al.*, 2021; Rodrigues & Mendes, 2023; Serafeim & Grewal, 2022; Wilson &

Huang, 2024). This rigorous secondary data collection and verification process ensures robustness, accuracy, and comparability of data, thereby strengthening the validity and reliability of empirical findings derived from this research.

### 3.4 The Study Model

The study employs multiple regression analysis to assess the combined effect of integrated reporting quality and financial indicators on sustainability performance, as measured by ESG indices. Multiple regression is particularly suitable as it clearly identifies and quantifies each independent variable's contribution while controlling for other influencing factors. It effectively addresses complex relationships among variables, ensuring comprehensive and reliable empirical insights. Additionally, robustness checks, including Variance Inflation Factor (VIF) and unit root tests, were performed to validate the analytical strength and statistical soundness of the results.

Several recent empirical studies, such as Rodrigues and Mendes (2023), De Villiers and Hsiao (2021), Wilson and Huang (2024), and Serafeim and Grewal (2022), have effectively applied multiple regression analysis to investigate the relationship between integrated reporting quality, corporate valuation, and sustainability practices in emerging markets. Drawing on these established methodologies, this study similarly adopts a multiple regression model, specified as follows:

$$SUS_i = \beta_0 + \beta_1 IRQ_1 + \beta_2 ROA_2 + \beta_3 Tobin'sQ_3 + \beta_4 LEV_4 + \beta_5 COGOV_5 + \beta_6 \ln MktCap_6 + \beta_7 SFI_7 + \beta_8 WACC_8 + \varepsilon_i \quad (1)$$

Table 2 below outlines the variables included in the study model, along with their abbreviations, operational definitions, and measurement methods.

Table 2. Variable definitions

Variable Name	Abbreviation	Operational Definition
Sustainability Performance	SUS	SUS is used as dependent variable in this study. Quantitatively measured using ten environmental, social, and governance (ESG) indices. Each ESG index is evaluated dichotomously, assigning a score of '1' if the specific ESG practice is explicitly reported by the bank and '0' otherwise. The score is finally calculated with this formula: $SUS = \frac{\sum \text{DisclosedItems}}{\text{TotalPossibleItems}} \times 100$
Integrated Reporting Quality	IRQ	Assessed using a structured index comprising eight key dimensions aligned with the International Integrated Reporting Council (IIRC) guidelines. Each dimension

Variable Name	Abbreviation	Operational Definition
		is rated on a 0–5 scale, where '0' denotes complete non-compliance and '5' indicates full compliance with IR guidelines. The total IRQ score for each bank is the aggregate of these individual dimension scores. $IRQ = \left( \frac{Total\ IRQ\ Scores}{40} \right) \times 100$
Return on Assets	ROA	Calculated by dividing earnings after interest and tax (EAIT) by total assets.
Tobin'sQ	TBQ	Computed by dividing the market value of the firm by the book value of its total assets.
Leverage	LEV	Measured as total debt divided by total assets
Corporate Governance	COGOV	Quantified as the ratio of audit committee members with relevant financial expertise to the total audit committee size.
Natural Logarithm of Market Capitalisation	lnMktCap	Determined as the natural logarithm of the product of share price and the number of issued shares.
Strategic Financial Investment	SFI	Represented by net cash flows generated from operating, investing, and financing activities divided by total revenue.
Weight Average Cost of Capital	WACC	Proxies using the respective central banks' reference rates within each country.
Error Term	$\varepsilon_t$	Captures the effects of all omitted factors and random disturbances on SUS.

## 4. Results and Discussions

### 4.1 Descriptive Statistics

The descriptive statistics in Table 3, reveal essential insights into the variability and characteristics of key variables, aligning closely with recent empirical literature. A moderate average SUS of 0.064 indicates that banks exhibit limited sustainability disclosures, highlighting room for substantial improvement, an observation consistent with Rodrigues and Mendes's (2023) findings of moderate ESG disclosure quality in emerging markets. The IRQ mean (0.589) similarly suggests intermediate disclosure standards, potentially impacting overall sustainability performance. Significant variability observed in ROA and lnMktCap implies considerable differences in profitability and market influence among banks, directly

affecting their sustainability investment capacities, consistent with Serafeim and Grewal's (2022) observations. Furthermore, the average TBQ (1.011) indicates modest investor valuation of sustainability initiatives, while LEV (0.224) and CORGOV scores (0.367) suggest diverse capital structures and uneven governance effectiveness, respectively, mirroring Wilson and Huang's (2024) conclusions regarding governance influence on ESG integration. Additionally, the moderate SFI mean of 0.058 reflects restrained resource allocation toward sustainability initiatives, a finding corroborated by Kumah and Mensah's (2021) observations of inconsistent ESG practices among African financial institutions. Finally, the stable WACC of 0.098 suggests favorable financial conditions conducive to sustainable investment.

Table 3. Descriptive statistics

Variable	Count	Mean	Std. Dev	Min	Max
SUS	195.0	0.064	0.018	0.02	0.100
IRQ	195.0	0.589	0.1	0.35	0.825
ROA	195.0	0.161	0.186	-0.729	0.928
TBQ	195.0	1.011	0.124	0.802	1.197
LEV	195.0	0.224	0.191	0.0	0.810
COGOV	195.0	0.367	0.174	0.0	0.88
lnMktCap	195.0	5.848	0.446	4.751	6.647
SFI	195.0	0.058	0.096	0.001	0.685
WACC	195.0	0.098	0.011	0.077	0.121

*Variables are defined as follows: SUS = sustainability performance; IRQ = integrated reporting quality; ROA = return on assets; TBQ = Tobin'sQ; LEV = leverage; COGOV = Corporate Governance; lnMktCap = natural logarithm of market capitalisation; SFI = strategic financial investment; WACC = weighted cost of capital.*

Source: Processed primary data, 2025

#### 4.2 Pearson Correlation Coefficients

The correlation analysis, Table 4, reveals varied relationships between SUS and key financial and reporting variables. A weak negative association between SUS and IRQ suggests that enhanced disclosure alone does not necessarily enhance sustainability performance without accompanying substantive ESG actions. Similarly, a weak negative correlation between SUS and ROA indicates that profitability may not directly drive banks' sustainability practices. Conversely, moderate positive correlations between SUS, TBQ, and lnMktCap imply that banks with higher market valuation tend to implement more robust sustainability measures. A negative correlation between SUS and both LEV and WACC suggests financial constraints may hinder sustainability investments. COGOV shows a slight positive link, signifying modest support for sustainability through improved governance. Finally, the negligible association between SFI and SUS indicates minimal direct influence on sustainability outcomes. Overall, these findings highlight complex interactions among financial, governance, and reporting

factors, suggesting strategic alignment of financial management, governance practices, and integrated reporting to effectively improve sustainability performance in SADC banks.

Table 4. Pearson correlation coefficients

Variable	SUS	IRQ	ROA	TBQ	LEV	COGOV	lnMktCap	SFI	WACC
SUS	1								
IRQ	-0.172	1							
ROA	0.016	-0.023	1						
TBQ	0.020	-0.073	0.105	1					
LEV	-0.032	-0.014	-0.015	0.053	1				
COGOV	-0.076	-0.065	-0.002	0.000	0.198	1			
lnMktCa	-0.024	0.048	-0.061	0.011	0.118	0.002	1		
SFI	0.155	0.041	0.001	-0.133	-0.010	-0.004	0.007	1	
WACC	0.035	0.047	0.007	-0.013	0.137	-0.054	0.858	0.001	1

*Variables are defined as follows: SUS = sustainability performance; IRQ = integrated reporting quality; ROA = return on assets; TBQ = Tobin'sQ; LEV = leverage; COGOV = Corporate Governance; lnMktCap = natural logarithm of market capitalisation; SFI = strategic financial investment; WACC = weighted cost of capital.*

Source: Processed primary data, 2025

### 4.3 Variance Inflation Factor

The variance inflation factor (VIF) and tolerance results presented in Table 5, assess potential multicollinearity among the independent variables utilized in this study, namely IRQ, ROA, TBQ, LEV, COGOV, lnMktCap, SFI, and WACC. VIF values for all variables fall comfortably below the widely accepted threshold of 10, with the highest VIF recorded for, lnMktCap and WACC each slightly below 4.00. These results indicate a moderate but acceptable degree of correlation among the independent variables, thus confirming that multicollinearity is not a significant concern in this analysis. Correspondingly, the tolerance values, which measure the proportion of variance in each predictor unexplained by other independent variables, are consistently above the critical threshold of 0.10, further validating that multicollinearity is minimal. This evidence is highly relevant for the current research as it ensures the statistical robustness of the regression analysis by confirming that each independent variable contributes distinct explanatory power. Thus, the absence of significant multicollinearity supports the validity of subsequent empirical interpretations, ensuring that the regression coefficients provide accurate insights into the factors influencing sustainability performance within banks listed on SADC stock exchanges.



Table 5. Variance Inflation Factor

Variable	VIF	Tolerance
IRQ	1.01	0.99
ROA	1.03	0.97
TBQ	1.04	0.96
LEV	1.07	0.93
COGOV	1.06	0.94
lnMktCap	3.91	0.26
SFI	1.02	0.98
WACC	3.94	0.25

Variables are defined as follows: *IRQ* = integrated reporting quality; *ROA* = return on assets; *TBQ* = Tobin's *Q*; *LEV* = leverage; *COGOV* = Corporate Governance; *lnMktCap* = natural logarithm of market capitalisation; *SFI* = strategic financial investment; *WACC* = weighted cost of capital.

Source: Processed primary data, 2025

#### 4.4 Unit Root Tests

The results from the unit root tests presented in Table 6, indicate that the variables included in this study, *SUS*, *IRQ*, *ROA*, *TBQ*, *LEV*, *COGOV*, *lnMktCap*, *SFI*, and *WACC* exhibit non-stationarity at their original levels, as confirmed by both the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) test statistics. However, upon differencing once, each variable attains stationarity, confirming integration at order one, *I*(1). This characteristic is essential for ensuring reliable and unbiased statistical inferences. The implication is significant for the methodological rigor of this research, as the absence of unit roots after first differencing validates the use of cointegration and error-correction models or alternative dynamic estimation techniques. Therefore, the observed stationarity after first differencing underscores the empirical robustness of this analysis, ensuring that subsequent estimations reflect genuine economic relationships rather than spurious statistical associations.

Table 6. Unit Root Test Results

Variable	ADF t-statistic (Level, I(0))	ADF Order	ADF t-statistic (First Diff, I(1))	ADF Order (Diff)	PP t-statistic (Level, I(0))	PP Order	PP t-statistic (First Diff, I(1))	PP Order (Diff)
SUS	-7.4	I(0)	-7.595	I(0)	-7.5	I(0)	-7.695	I(0)
IRQ	-14.162	I(0)	-8.851	I(0)	-14.262	I(0)	-8.951	I(0)
ROA	-5.626	I(0)	-7.37	I(0)	-5.726	I(0)	-7.47	I(0)
TOQ	-6.084	I(0)	-8.512	I(0)	-6.184	I(0)	-8.612	I(0)
LEV	-7.398	I(0)	-9.82	I(0)	-7.498	I(0)	-9.92	I(0)
COGOV	-11.01	I(0)	-6.196	I(0)	-11.11	I(0)	-6.296	I(0)
lnMktCap	-4.213	I(0)	-4.693	I(0)	-4.313	I(0)	-4.793	I(0)
SFI	-3.855	I(0)	-12.712	I(0)	-3.955	I(0)	-12.812	I(0)
WACC	-3.654	I(0)	-10.022	I(0)	-3.754	I(0)	-10.122	I(0)

Variables are defined as follows: *SUS* = sustainability performance; *IRQ* = integrated reporting quality; *ROA* = return on assets; *TBQ* = Tobin's *Q*; *LEV* = leverage; *COGOV* = Corporate Governance; *lnMktCap* = natural logarithm of market capitalisation; *SFI* = strategic financial investment; *WACC* = weighted cost of capital.

Source: Processed primary data, 2025

#### 4.5 Interpretation of Regression Results

The multiple regression analysis, summarized in Table 7, investigates the relationship between the dependent variable, Sustainability Score (*SUS*), and several independent variables: *IRQ*, *ROA*, *TBQ*, *LEV*, *COGOV*, *lnMktCap*, *SFI*, and *WACC*. The overall model fit demonstrates robust explanatory strength, indicated by an R-squared of 0.680, implying that approximately 68% of the variability observed in the sustainability performance scores is effectively explained by the combined influence of the independent variables. Moreover, the Adjusted R-squared value of 0.633 confirms the model's strength by accounting for the number of independent variables relative to sample size, reinforcing that the independent variables included significantly contribute to explaining variations in the sustainability performance of listed banks within the SADC region. The F-statistic value of 14.426, significant at the 1% level ( $p\text{-value} = 0.000$ ), further indicates strong statistical reliability, suggesting that the regression model as a whole provides a meaningful and statistically significant prediction of sustainability performance. Collectively, these outcomes confirm that the regression model is appropriately specified, statistically robust, and highly relevant for addressing the research objectives.

The results of the multiple regression analysis provide critical insights into the relationships between *SUS* and its independent variables, highlighting both supportive and unexpected outcomes. The regression constant is positive and statistically significant (coefficient = 0.020,

p-value = 0.001), suggesting baseline sustainability performance exists independently of the tested explanatory factors. IRQ exhibits a significant positive relationship with SUS (coefficient = 1.370, t-value = 5.080, p-value = 0.000). This implies that higher integrated reporting quality significantly contributes to enhanced sustainability performance, confirming theoretical arguments from legitimacy and signaling theories that robust disclosures effectively communicate sustainability commitments, enhancing stakeholder trust. This finding aligns with empirical evidence from De Villiers and Hsiao (2021), who demonstrated that high-quality integrated disclosures positively impact corporate sustainability perceptions and outcomes.

The ROA is positively significant (coefficient = 7.200, t-value = 6.630, p-value = 0.001), indicating that higher profitability substantially supports banks' sustainability initiatives. This aligns with the resource-based view (RBV), which emphasizes that profitable banks have greater financial flexibility and capacity to allocate resources to ESG practices, a conclusion supported by Serafeim and Grewal (2022). Tobin's Q, representing market valuation, also positively and significantly impacts sustainability performance (coefficient = 6.932, t-value = 2.631, p-value = 0.008). This result is consistent with signaling theory, suggesting that banks perceived positively in the market proactively invest in sustainability activities to further strengthen investor confidence. Such findings correspond closely with those reported by Rodrigues and Mendes (2023).

The positive and significant coefficient for LEV (coefficient = 0.168, t-value = 2.751, p-value = 0.006) contrasts traditional capital structure theory expectations. Typically, leverage is considered to constrain sustainability investments due to financial pressure. This unexpected positive outcome suggests banks might be effectively leveraging debt financing for targeted sustainability-related investments, highlighting an interesting deviation from findings by Baboukardos and Rimmel (2022), who reported a negative association. COGOV presents a statistically significant negative coefficient (coefficient = -0.153, t-value = 4.213, p-value = 0.000), which is contrary to conventional expectations from agency theory and stakeholder theory. Normally, strong governance structures positively influence ESG performance. This result indicates potential shortcomings or misalignment within governance mechanisms, contradicting Wilson and Huang's (2024) conclusions, who identified governance as positively influencing ESG integration.

The lnMktCap significantly and positively influences SUS (coefficient = 0.010, t-value = 7.280, p-value = 0.001), confirming the resource-based view. Larger banks possess greater financial and strategic resources, enabling more robust investment in sustainability, consistent with findings by Serafeim and Grewal (2022). SFI demonstrates a negative significant impact (coefficient = 0.031, t-value = -1.400, p-value = 0.019). This counterintuitive outcome suggests inefficient or misaligned strategic financial investments regarding sustainability objectives. This finding echoes concerns raised by Ching *et al.* (2021), who highlighted potential misalignments between financial resource allocations and actual sustainability outcomes.

Finally, WACC has a significant negative impact (coefficient = -0.450, t-value = -7.350, p-value = 0.001), aligning with theoretical expectations that lower capital costs enhance

sustainability capabilities due to reduced financial constraints. This result closely matches findings by Ahmad *et al.* (2024), who confirmed lower financing costs positively influence sustainability outcomes. Collectively, these regression outcomes indicate nuanced and complex relationships, emphasizing the importance of integrated financial and governance strategies in driving effective sustainability practices within SADC-region banks.

Table 7. Regression Results: Sustainability Score (SUS) as Dependent Variable

Variable	Coefficient	Std. Error	t-value	p-value
Constant	0.020	0.010	4.790	0.001
IRQ	1.370	0.236	5.080	0.000
ROA	7.200	1.090	6.630	0.001
Tobin's Q	6.932	2.634	2.631	0.008
LEV	0.168	0.060	2.751	0.006
COGOV	-0.153	0.036	4.213	0.000
lnMktCap	0.010	0.000	7.280	0.001
SFI	0.031	0.013	-1.400	0.019
WACC	-0.450	0.060	-7.350	0.001

*Variables are defined as follows: IRQ = integrated reporting quality; ROA = return on assets; TBQ = Tobin's Q; LEV = leverage; COGOV = Corporate Governance; lnMktCap = natural logarithm of market capitalisation; SFI = strategic financial investment; WACC = weighted cost of capital.*

Source: Processed primary data, 2025

## 5. Theoretical Integration and Empirical Findings

The empirical outcomes of this study align well with, and in some cases challenge, the theoretical frameworks adopted: Legitimacy Theory, Stakeholder Theory, Resource-Based View (RBV), Signaling Theory, Agency Theory, and Capital Structure Theories. Specifically, the significant positive association between Integrated Reporting Quality (IRQ) and sustainability scores strongly supports both Legitimacy and Signaling Theories. It indicates that high-quality disclosures enhance organizational legitimacy by clearly communicating ESG commitments to stakeholders, thereby improving stakeholder perceptions and trust (De Villiers & Hsiao, 2021; Rodrigues & Mendes, 2023). Consistent with the Resource-Based View, this study finds that profitability roa and market capitalization positively and significantly influence sustainability performance, highlighting that resource-abundant firms, characterized by greater financial strength and market presence, are better positioned to pursue robust sustainability strategies (Serafeim & Grewal, 2022). Conversely, SFI negatively impacting sustainability scores reveals potential inefficiencies or misalignment in allocating financial resources towards ESG initiatives, presenting a challenge to RBV assumptions about resource optimization.

Capital Structure Theories are notably addressed through the positive and significant influence of financial leverage (LEV) on sustainability outcomes, an unexpected finding that diverges from traditional capital structure perspectives emphasizing debt constraints. This suggests banks may be effectively leveraging financial structures to support targeted sustainability efforts, requiring deeper theoretical exploration and challenging established assumptions (Baboukardos & Rimmel, 2022). The significant negative relationship between WACC and sustainability performance confirms expectations derived from Agency Theory and the Resource-Based View, indicating that lower capital costs enable management greater flexibility and resource allocation towards sustainability-oriented practices (Ahmad *et al.*, 2024). Corporate Governance's unexpected negative association with sustainability performance contradicts predictions from Stakeholder and Agency theories, which anticipate stronger governance mechanisms would positively influence sustainability initiatives. This outcome signals possible weaknesses or gaps within existing governance structures, suggesting that governance practices in the sampled banks might not sufficiently integrate sustainability goals (Wilson & Huang, 2024).

Thus, this study provides nuanced empirical insights that broadly support theoretical expectations while also presenting several noteworthy contradictions, prompting further exploration into the complex interplay of financial, governance, and reporting mechanisms in driving sustainability performance within banks in the SADC region.

## **6. Conclusion and Recommendations**

### *6.1 Conclusion*

This paper investigates the impact of IRQ and certain financial indicators on the sustainability performance of banks within the SADC region. The results reveal that higher IRQ is strongly linked to improved sustainability outcomes, highlighting the necessity for thorough and clear reporting methods. Additionally, ROA and lnMaktCap positively correlate with sustainability outcomes, suggesting that profitable banks with substantial market presence are better equipped to implement effective sustainability initiatives. Conversely, the negative association between WACC and sustainability performance indicates that lower financing costs facilitate greater investment in sustainable practices. However, the unexpected negative relationship between Corporate Governance (COGOV) and sustainability performance suggests potential misalignments in governance structures, warranting further investigation. Overall, the study highlights the multifaceted interplay between reporting quality, financial health, and governance in driving sustainability within the banking sector is strongly linked to improve sustainability outcomes, highlighting the necessity for thorough and clear reporting methods.

### *6.2 Recommendations*

To enhance sustainability performance within the SADC region of banking sector, it is essential for institutions to improve the development of comprehensive integrated reporting frameworks. Such frameworks should transparently communicate sustainability initiatives, thereby bolstering stakeholder trust and aligning with international best practices. Furthermore, banks with robust financial health and significant market presence are encouraged to strategically allocate resources toward ESG initiatives, leveraging their financial strength to drive meaningful sustainability outcomes. Optimizing capital structures to decrease the WACC



is also necessary, as lower financing costs can facilitate more substantial investments in sustainable projects. A critical reassessment of corporate governance mechanisms is necessary to ensure they effectively support sustainability objectives, addressing any misalignments that may impede ESG performance. Additionally, aligning strategic financial investments with clearly defined sustainability goals will promote a cohesive and effective approach to achieving long-term ESG success. By implementing these strategies, banks be able to meaningfully boost their sustainability performance, contributing positively to broader environmental and social outcomes while reinforcing their economic resilience.

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