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Board gender diversity and bank performance in Africa: A scoping review of empirical evidence

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Abstract:

This scoping review maps empirical evidence on the relationship between board gender diversity and bank performance in African banking systems. The review responds to a fragmented literature in which evidence remains uneven across geography, conceptualization, measurement, and empirical design. Following the Arksey and O'Malley framework, the Levac et al. refinement, JBI methodological guidance, and PRISMA-ScR reporting principles, the study searched Scopus as a single bibliographic source and retained 11 empirical studies published up to 1 April 2026. Eligible studies focused on banks or financial institutions, treated board gender diversity as a governance variable, and examined profitability, efficiency, risk, stability, disclosure, failure probability, or resilience. The synthesis is exploratory and cartographic rather than meta-analytical; therefore, it does not estimate a pooled effect size. Results show that the evidence is concentrated mainly in Nigeria and Ghana, while North Africa remains thinly represented and Morocco is absent from the retained empirical corpus. Board gender diversity is most frequently operationalized through the proportion of women directors or the presence of at least one woman on the board, whereas bank performance remains largely measured through ROA and ROE. More recent studies increasingly incorporate efficiency, risk, stability, disclosure, and bank-failure outcomes. Findings are mixed and depend on measurement choices, estimation strategy, institutional setting, and whether female representation translates into substantive influence through monitoring, committee participation, risk oversight, disclosure quality, and strategic decision-making. The review concludes that board gender diversity should not be interpreted as an automatic determinant of bank performance, but as a context-sensitive governance resource whose effect depends on institutional conditions, board processes, and critical-mass dynamics.

Keywords: Board gender diversity; bank performance; corporate governance; Africa; scoping review.
JEL Classification: G21; G34; J16; M14.
Paper type: Theoretical Research / Scoping Review.

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1. Introduction

Corporate governance occupies a central place in banking research because banks are not ordinary firms. Their high leverage, informational opacity, maturity transformation function, regulatory exposure, and systemic importance make governance failures particularly costly for depositors, shareholders, regulators, and the wider economy. Unlike many non-financial firms, banks operate under prudential constraints and may transmit governance weaknesses to financial stability. For this reason, the board of directors is expected not only to supervise managerial action but also to support risk discipline, internal control, strategic orientation, and the preservation of institutional soundness (Levine, 2004; Basel Committee on Banking Supervision, 2015; Pathan & Faff, 2013).

Within this broader debate, board gender diversity has shifted from a normative issue of representation to an empirical question concerning board effectiveness. The central research problem is no longer whether women should be present on boards, but whether and under what conditions their presence influences monitoring intensity, deliberation quality, risk oversight, disclosure, efficiency, and bank performance. Foundational studies suggest that women directors may improve board monitoring and attendance, reduce groupthink, and broaden the cognitive and relational resources available to the board (Carter et al., 2003; Adams & Ferreira, 2009; Hillman et al., 2000). In banking, however, the effect cannot be assumed to be uniform, because board decisions interact with regulatory pressure, ownership structure, risk-taking incentives, and market discipline.

The theoretical literature offers several competing yet complementary explanations. Agency theory suggests that gender-diverse boards may strengthen monitoring and reduce managerial opportunism by increasing board independence, diligence, and questioning capacity (Jensen & Meckling, 1976; Fama & Jensen, 1983). Resource dependence theory argues that women directors may contribute additional expertise, legitimacy, stakeholder knowledge, and external networks (Pfeffer & Salancik, 1978; Hillman et al., 2000). Critical mass theory adds that the effect of female representation may remain weak when women occupy isolated or token positions; substantive influence may emerge only when women reach sufficient numerical and functional presence within the board and its committees (Kanter, 1977; Owen & Temesvary, 2018).

Empirically, this field remains marked by contradictions. Some studies identify a positive association between board gender diversity and bank profitability, efficiency, or disclosure quality, while others report negative, non-significant, non-linear, or conditional effects. Part of this divergence reflects methodological choices. Studies differ in how they define gender diversity, how they conceptualize performance, whether they address endogeneity, and whether they consider thresholds or institutional moderators (Gulamhussen & Santa, 2015; Bhatia & Gulati, 2021; Othmani, 2021). A study based on the percentage of women directors and ROA does not assess the same phenomenon as a study examining female membership in risk committees and bank default probability.

The African evidence base is especially fragmented. Available studies are concentrated in a limited number of countries, particularly Nigeria and Ghana, while North Africa and several francophone contexts remain weakly represented. This uneven geography is analytically important because African banking systems differ in legal origin, regulatory enforcement, ownership concentration, financial-market development, board norms, and gender-inclusion policies. Consequently, the relationship between board gender diversity and bank performance cannot be interpreted as a single African effect. It must be read as a context-sensitive governance relationship embedded in heterogeneous institutional environments (Adeabah et al., 2019; Okoyeuzu et al., 2021; Ofori-Sasu et al., 2022; Koua & N'Gatta, 2023).

For the purpose of this review, bank performance is defined operationally as a multidimensional set of outcomes reflecting profitability, efficiency, risk, stability, disclosure, failure probability, and resilience. This definition deliberately goes beyond the conventional reliance on ROA and ROE. Profitability indicators remain useful because they capture short-term accounting returns, but they are insufficient in banking, where excessive risk-taking can temporarily improve profitability while weakening prudential resilience. A broader performance lens is therefore necessary to interpret whether board gender diversity contributes to value creation, risk discipline, and institutional soundness (Gulamhussen & Santa, 2015; Ofori-Sasu et al., 2022; Ben Mim et al., 2025).

This article conducts a scoping review of empirical studies on board gender diversity and bank performance in Africa, while drawing selectively on comparable MENA and emerging-market evidence when it clarifies mechanisms directly relevant to African banking systems. The review has four objectives: to map how board gender diversity is conceptualized and measured; to identify which dimensions of bank performance are examined; to classify the direction and heterogeneity of empirical findings; and to clarify the conceptual, geographical, and methodological gaps that structure the field. The review does not aim to estimate a pooled effect size. Its purpose is to organize a dispersed literature into an analytical map that can guide future empirical research (Arksey & O'Malley, 2005; Levac et al., 2010; Tricco et al., 2018).

The contribution of this review is threefold. First, it consolidates a small but growing empirical literature that remains dispersed across countries, journals, methods, and outcome measures. Second, it reframes the gender-diversity-bank-performance relationship as a conditional governance mechanism rather than a direct and universal effect. Third, it develops an integrative interpretation linking agency theory, resource dependence theory, and critical mass theory to the distinction between descriptive representation and substantive influence. This distinction is central because the governance relevance of diversity depends not only on the number of women present, but also on their authority, expertise, committee participation, and capacity to shape board decisions (Bhatia & Gulati, 2021; Owen & Temesvary, 2018; Koua & N'Gatta, 2023).

The remainder of the article is organized as follows. The next section presents the theoretical foundations and conceptual framework. The methodology section explains the scoping-review design, search strategy, eligibility criteria, study-selection procedure, data-charting approach, appraisal logic, and synthesis strategy. The results section maps the retained evidence by geography, method, measurement, outcomes, and findings. The discussion interprets the heterogeneity of results and develops implications for theory, research design, and banking governance. The final section summarizes the contribution and outlines directions for future research.

2. Theoretical foundations and conceptual framework

2.1. Agency theory, monitoring, and risk discipline

Agency theory provides the first explanatory lens for understanding why board gender diversity may matter in banks. Banks are exposed to severe agency problems because managers may pursue growth, lending expansion, or risk-taking strategies that do not fully align with shareholders, depositors, or regulators. A more diverse board may strengthen monitoring if women directors increase attendance, challenge dominant coalitions, demand more transparent reporting, or improve the supervision of internal controls. This mechanism is particularly relevant for banking because weak monitoring can affect asset quality, capital adequacy, and risk appetite (Jensen & Meckling, 1976; Fama & Jensen, 1983; Adams & Ferreira, 2009; Laeven & Levine, 2009).

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2.2. Resource dependence and strategic board resources

Resource dependence theory offers a second interpretation. Boards are not only monitoring bodies; they also provide access to expertise, legitimacy, information, and external relationships. Women directors may broaden the board's cognitive resources, stakeholder sensitivity, and reputational legitimacy. In African banking systems, where trust, regulatory credibility, and stakeholder relationships remain central, this resource-provision role may be especially relevant. However, the effect depends on whether women directors occupy positions that allow them to use these resources in strategic deliberation (Pfeffer & Salancik, 1978; Hillman et al., 2000; Carter et al., 2003).

2.3. Critical mass, tokenism, and substantive influence

Critical mass theory provides a third and necessary correction to linear interpretations. The appointment of one woman may satisfy symbolic expectations without altering boardroom power relations. Substantive influence may require a threshold of representation and, more importantly, participation in influential committees such as audit, risk, governance, and nomination committees. The distinction between descriptive representation and substantive influence is therefore central to this review. Descriptive representation refers to numerical presence; substantive influence refers to the capacity to shape monitoring, risk oversight, disclosure, strategic choices, and accountability processes (Kanter, 1977; Owen & Temesvary, 2018; Koua & N'Gatta, 2023).

2.4. Integrative framework

The three theories are not mutually exclusive. Agency theory is most useful when diversity operates through monitoring and control. Resource dependence theory is more relevant when diversity improves expertise, legitimacy, and external linkages. Critical mass theory explains why weak, absent, or non-linear effects may occur when representation remains tokenistic. The integrative framework adopted in this review therefore treats board gender diversity as a conditional governance resource whose effect depends on measurement, board processes, institutional context, and the performance dimension under analysis (Adams & Ferreira, 2009; Gulamhussen & Santa, 2015; Owen & Temesvary, 2018).

Table 1 : Integrative conceptual framework linking gender diversity, governance mechanisms, and bank performance

Theoretical lens	Primary mechanism	Expected governance channel	Boundary condition
Agency theory	Enhanced monitoring and reduced managerial opportunism	Attendance, questioning, audit/risk oversight, internal control	Most relevant when women directors have independence and access to monitoring committees
Resource dependence theory	Broader expertise, legitimacy, and external linkages	Strategic resources, stakeholder knowledge, reputational capital	Most relevant when women directors hold expertise and participate in strategic deliberation
Critical mass theory	Shift from token presence to effective influence	Voice, coalition formation, dissent, agenda-setting	Most relevant when female representation reaches sufficient numerical and functional presence
Institutional contingency	Context shapes whether diversity becomes consequential	Regulation, ownership, legal origin, gender norms	Most relevant when comparing African subregions and emerging banking systems

Source: Authors

3. Methodology

3.1. Review design

This study adopts a scoping review design because the literature on board gender diversity and bank performance in Africa remains conceptually fragmented, geographically uneven, and methodologically heterogeneous. A scoping review is appropriate when the objective is to map the extent, range, and nature of evidence rather than to estimate a pooled causal effect. The review follows the methodological logic proposed by Arksey and O'Malley (2005), refined by Levac et al. (2010), aligned with JBI guidance for scoping reviews (Peters et al., 2020), and reported with reference to PRISMA-ScR (Tricco et al., 2018).

3.2. Protocol and Population-Concept-Context framework

An ex-ante review protocol was developed before screening. The protocol specified the research objective, eligibility criteria, search string, source database, Population-Concept-Context framework, screening logic, data-charting fields, coding categories, and synthesis strategy. The protocol was not registered in a public repository; this status is reported transparently and is treated as a limitation. The Population-Concept-Context framework defined the population as banks or financial institutions, the concept as board gender diversity, and the context as African banking systems, with analytically comparable MENA or emerging-market banking studies considered only when they clarified mechanisms directly relevant to the African evidence base (Arksey & O'Malley, 2005; Levac et al., 2010; Peters et al., 2020; Tricco et al., 2018).

3.3. Information source and search strategy

The search was conducted in Scopus and completed on 1 April 2026. Scopus was selected because it provides broad and reproducible coverage of peer-reviewed journals in finance, economics, management, corporate governance, and banking. The decision to use Scopus as the single bibliographic source ensured consistency in indexing standards and search reproducibility, but it may have excluded relevant work published in regional, francophone, Arabic-language, or non-indexed outlets. This limitation is explicitly integrated into the interpretation of findings and the future research agenda (Gusenbauer & Haddaway, 2020; Gusenbauer, 2022).

The search string combined terms related to board gender diversity, banking institutions, performance outcomes, and African geography. It included expressions such as 'board gender diversity', 'female directors', 'women on boards', 'bank', 'financial institution', 'financial performance', 'ROA', 'ROE', 'efficiency', 'stability', 'risk', 'bank failure', 'default risk', and country or regional identifiers covering Africa and its subregions. The search was limited to articles indexed in relevant subject areas and written in English. Although this language restriction improved screening consistency, it may have reduced the visibility of North African and francophone African research (Peters et al., 2020; Tricco et al., 2018).

3.4. Eligibility criteria and analytical inclusion of comparable contexts

Studies were included if they were empirical, focused on banks or financial institutions, examined board-level gender diversity as a governance variable, and reported at least one outcome related to profitability, efficiency, risk, stability, disclosure, failure probability, or resilience. Studies were excluded if they were purely conceptual, unrelated to banking, did not include board-level gender diversity, did not report identifiable banking outcomes, were conference abstracts without sufficient empirical detail, or were not available in full text. Comparable MENA or emerging-market studies were retained only when they provided direct analytical relevance for interpreting African banking evidence, particularly on risk, default probability, or critical-mass mechanisms (Peters et al., 2020; Tricco et al., 2018).

3.5. Study selection, data charting, and coding

Study selection followed a staged PRISMA-ScR-informed procedure. Records were first screened by title and abstract against the eligibility criteria, followed by full-text assessment for potentially relevant studies. Borderline cases were reassessed against the Population-Concept-Context framework to ensure consistency. A standardized screening grid was used to document inclusion and exclusion decisions. The final corpus comprised 11 empirical studies. Because the review is scoping rather than meta-analytical, the emphasis was placed on transparency of selection, comparability of extracted information, and interpretive mapping rather than statistical aggregation (Peters et al., 2020; Tricco et al., 2018).

A structured data-charting form was developed and pretested on an initial subset of studies before full extraction. The form captured authorship, year, journal, country or region, sample, study period, empirical method, theoretical framework, board gender-diversity measure, performance outcome, treatment of endogeneity, principal findings, and stated limitations. The form was refined during extraction to add fields related to critical-mass logic, committee-level influence, and risk or stability outcomes. These adjustments improved analytical sensitivity without altering the inclusion criteria (Levac et al., 2010; Peters et al., 2020).

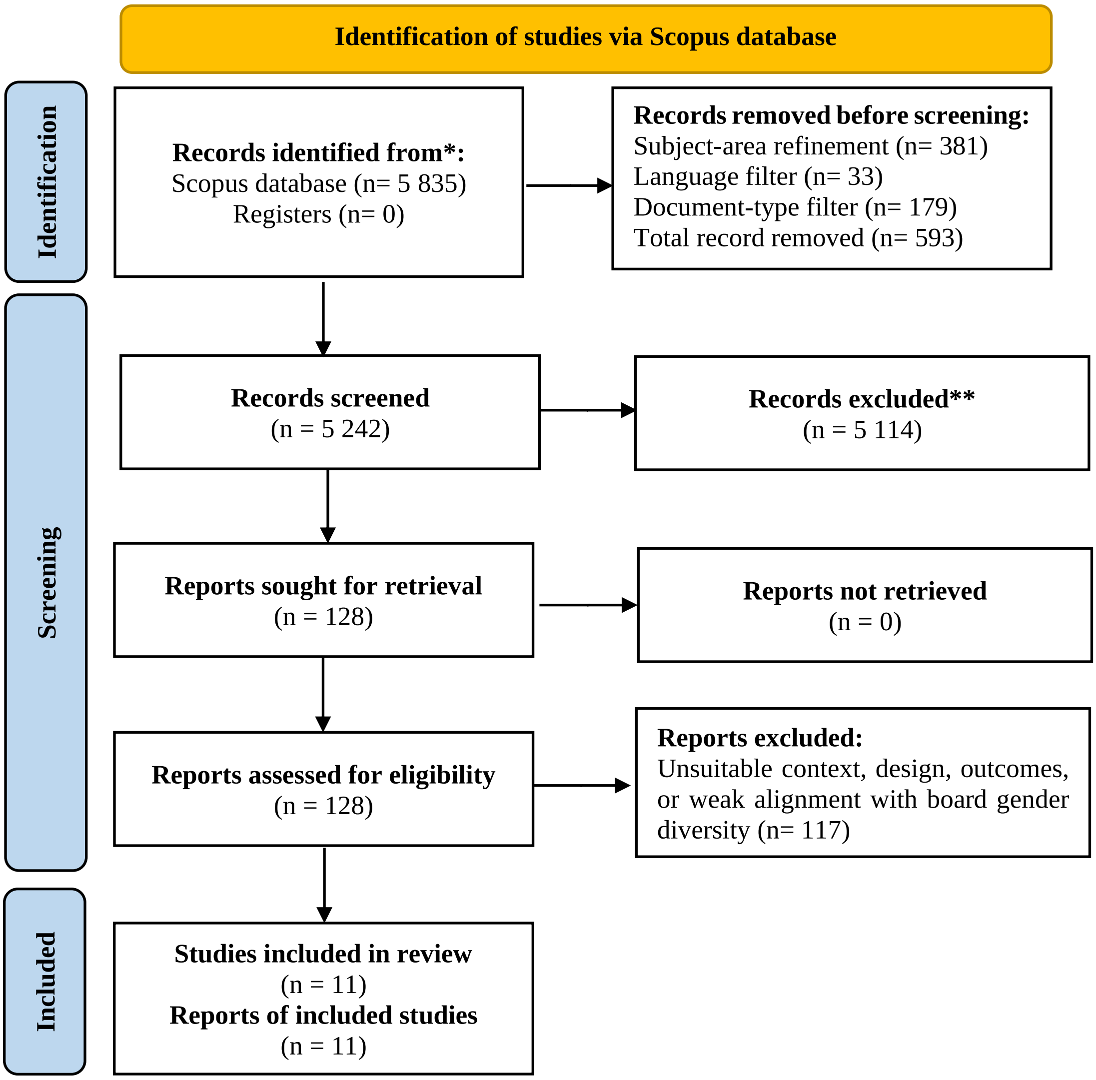
The coding framework classified studies along six dimensions: direction of the relationship, diversity measure, performance dimension, empirical method, geographic scope, and methodological robustness. Direction was coded as positive, negative, non-significant, mixed, or conditional. Diversity measures were coded as proportional, dichotomous, index-based, threshold-based, or role-specific. Performance outcomes were classified as profitability, efficiency, disclosure, risk, stability, failure probability, or resilience. Methods were grouped into static panel models, dynamic panel estimators, DEA-based efficiency models, and probabilistic risk or failure models (Levac et al., 2010; Peters et al., 2020).

3.6. Methodological appraisal and synthesis strategy

A formal risk-of-bias score was not calculated because scoping reviews do not always require the same critical appraisal procedures as systematic reviews designed for effect estimation. Nevertheless, a structured methodological appraisal was added in response to the reviewer's recommendation. This appraisal considered sample adequacy, clarity of measurement, treatment of endogeneity, appropriateness of the performance outcome, transparency of model specification, and alignment between method and conclusion. The appraisal is used cautiously as an interpretive tool rather than as a basis for excluding studies (Peters et al., 2020; Tricco et al., 2018).

The synthesis proceeded in three stages. First, descriptive mapping summarized the corpus by geography, period, sample, method, and outcome. Second, thematic synthesis examined how gender diversity and bank performance were operationalized. Third, analytical synthesis interpreted why findings vary across contexts, measures, and estimation strategies. The synthesis gives particular attention to whether diversity operates through monitoring, strategic resources, risk discipline, disclosure, committee participation, or critical-mass effects (Arksey & O'Malley, 2005; Levac et al., 2010).

Figure 1. PRISMA-ScR-style flow of study identification and selection via Scopus



*Records identified from Scopus only.
**Excluded after title and abstract screening.

Source: Authors

4. Results

The final corpus contains 11 empirical studies examining board gender diversity and banking outcomes in African or analytically comparable banking contexts. The corpus is small but informative. It shows a field that has moved from simple direct-effect models toward more diversified approaches incorporating efficiency, risk, disclosure, failure probability, and conditional effects. However, the evidence remains uneven in geography, measurement, and methodological robustness (Adeabah et al., 2019; Okoyeuzu et al., 2021; Ofori-Sasu et al., 2022; Koua & N'Gatta, 2023; Ben Mim et al., 2025; Hordofa & Ionascu, 2025).

Geographically, the literature is concentrated in West Africa, especially Nigeria and Ghana. Nigeria contributes several studies using listed or deposit-money banks, while Ghana is represented through efficiency-oriented analysis. Kenya and Ethiopia provide East African evidence, Tunisia offers North African evidence, and WAEMU studies provide a regional francophone perspective. Multi-country African analysis appears through studies on disclosure and banking crises. Morocco is absent from the retained corpus, which represents a clear

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geographical gap for future research (Ekadah & Mboya, 2012; Adeabah et al., 2019; Okoyeuzu et al., 2021; Othmani, 2021; Koua & N'Gatta, 2023; Hordofa & Ionascu, 2025).
The temporal coverage of studies generally spans medium-length panels, often between eight and fifteen years. This is useful for assessing governance-performance relationships over time, but most studies still interpret the relationship statically. Few examine whether the influence of board gender diversity is immediate, delayed, cumulative, or crisis-dependent. This temporal weakness matters because board influence may require time to translate into monitoring routines, committee practices, risk decisions, or strategic reorientation (Othmani, 2021; Okoyeuzu et al., 2021; Ben Mim et al., 2025; Hordofa & Ionascu, 2025).
The corpus also reveals substantial methodological diversity. Earlier studies rely mainly on static regression models, including ordinary least squares, random effects, fixed effects, and generalized least squares. More recent studies increasingly adopt System GMM, two-stage DEA, logit models, or interaction terms. This evolution reflects growing awareness that corporate governance variables are endogenous: better-performing banks may appoint more women, while women directors may also affect future performance. Consequently, results from models that do not address reverse causality or unobserved heterogeneity should be interpreted cautiously (Adeabah et al., 2019; Okoyeuzu et al., 2021; Ofori-Sasu et al., 2022; Ben Mim et al., 2025; Hordofa & Ionascu, 2025).

Table 2. Overview of retained empirical studies on board gender diversity and bank performance

Study/context	Sample and period	Method	Gender-diversity measure	Outcome and main reading
Ekadah & Mboya (2012), Kenya	43 banks; 1998-2009	Stepwise regression	Presence and percentage of women	ROA; mixed/negative evidence in early context
Adeabah et al. (2019), Ghana	21 banks; 2009-2017	Two-stage DEA and regression	% women directors	Efficiency; positive association and threshold logic
Okoyeuzu et al. (2021), Nigeria	Listed deposit-money banks; 2006-2018	Two-step System GMM	% female directors	ROA/ROE; positive after dynamic estimation
Oyidih (2023), Nigeria	13 banks; 2010-2021	Random-effects panel	% women directors	ROA; association varies by specification
Dopemu & Ogundele (2024), Nigeria	11 banks; 2010-2021	GLS panel regression	On-board and off-board gender diversity	ROA; role-sensitive diversity approach
Koua & N'Gatta (2023), WAEMU	Regional banking sample; 2005-2017	Panel regression	% women directors	ROA/ROE; weaker or negative associations
Othmani (2021), Tunisia	Tunisian banks; 2005-2018	Two-way cluster regression	% women directors	ROA/ROE and risk; differentiated effects
Ofori-Sasu et al. (2022), Africa	42 countries; 2006-2018	Panel estimates/System GMM	Presence/number of women	Disclosure and crisis probability
Ben Mim et al. (2025), MENA	61 banks; 2012-2020	Logit and panel models	% women directors	Failure/default risk; prudential outcome
Mohsni, Mim & Hajji (2023), North Africa/GCC	61 banks; 2009-2021	System GMM	% women directors	ROA/ROE; comparative emerging-market evidence
Hordofa & Ionascu (2025), Ethiopia	17 banks; 2010-2021	Panel regression with moderation	% women directors and board size	ROA; conditional/moderated effects

Source: Authors

Table 3. Geographical and analytical distribution of the retained evidence

Subregion/category	Countries or scope	Approx. studies	Interpretive implication
West Africa	Nigeria, Ghana, WAEMU	6	Most visible evidence; several panel designs; stronger visibility of Nigeria and Ghana
East Africa	Kenya, Ethiopia	2	Smaller single-country studies; limited generalizability
North Africa	Tunisia; broader MENA comparison	2	Thin direct evidence; Morocco absent from retained corpus
Africa-wide	42 African countries	1	Useful for macro-regional inference on disclosure and crisis probability
Comparable MENA/emerging contexts	Selected MENA/North Africa-GCC studies	2	Retained only for analytical relevance to risk, default, and critical-mass mechanisms

Source: Authors

Board gender diversity is measured most often through the percentage of women directors. This measure is transparent and comparable, but it captures descriptive representation rather than substantive influence. A second group of studies uses a dummy variable indicating the presence of at least one woman on the board. This approach is even more limited because it cannot distinguish token appointment from meaningful participation. A smaller and more recent strand introduces multidimensional, role-specific, or threshold-based measures, which are better aligned with the theoretical distinction between presence and influence (Ekadah & Mboya, 2012; Adeabah et al., 2019; Othmani, 2021; Dopemu & Ogundele, 2024; Ben Mim et al., 2025). Bank performance remains dominated by ROA and ROE. These indicators are useful, widely available, and comparable, but they reduce banking outcomes to accounting profitability. Recent studies broaden the outcome space by examining efficiency, disclosure quality, crisis probability, risk exposure, failure probability, and stability. This shift is important because banks can be profitable while accumulating excessive risk. A broader performance definition therefore offers a more valid basis for assessing the governance role of board gender diversity (Adeabah et al., 2019; Okoyeuzu et al., 2021; Ofori-Sasu et al., 2022; Ben Mim et al., 2025; Hordofa & Ionascu, 2025).

Table 4. Typology of board gender-diversity measures

Measurement type	Operational definition	Use in the corpus	Interpretive limitation or advantage
Percentage of women	Ratio of women directors to board size	Dominant measure	Captures descriptive representation but not authority or committee influence
Dummy presence	1 if at least one woman is on the board	Common in early or data-limited studies	Highly exposed to tokenism bias
Diversity indices	Blau or Shannon-type distribution measures	Rare in retained African banking studies	Better suited to heterogeneity but still weak on influence
Critical-mass thresholds	Non-linear or threshold-based specification	Emerging	Useful for identifying when representation may become consequential
Role-sensitive measures	Female executive, independent, audit/risk committee membership	Still limited	Closest to substantive influence and governance mechanisms

Source: Authors

The direction of findings is heterogeneous. Positive relationships are reported in studies where gender diversity is associated with profitability, efficiency, or improved governance outcomes. Negative or non-significant relationships appear in contexts where representation may be tokenistic, empowerment limited, or estimation strategies insufficiently sensitive to non-

linearity. Conditional findings are especially important because they suggest that board gender diversity matters only under certain thresholds, institutional conditions, or board-structure configurations. This pattern supports an interpretation based on substantive influence rather than numerical presence alone (Adeabah et al., 2019; Okoyeuzu et al., 2021; Othmani, 2021; Koua & N'Gatta, 2023; Hordofa & Ionascu, 2025).
The methodological appraisal indicates that studies using dynamic panel models, DEA, or probabilistic outcomes generally provide stronger analytical leverage than simple static regressions, although they also require careful diagnostic testing and transparent specification. Static models remain useful for exploratory mapping but are less suited to causal interpretation. This methodological gradient partly explains why the literature produces mixed results: studies are not estimating the same relationship with the same conceptual and econometric assumptions (Adeabah et al., 2019; Okoyeuzu et al., 2021; Ofori-Sasu et al., 2022; Ben Mim et al., 2025; Hordofa & Ionascu, 2025).

Table 5. Link between method, outcome definition, and type of finding

Method family	Typical outcome	Observed finding pattern	Methodological implication
Static panel models	ROA/ROE	Positive, negative, or non-significant	Useful descriptively but vulnerable to omitted-variable bias and reverse causality
System GMM	ROA/ROE and crisis-related outcomes	Often more favorable or differentiated	Addresses dynamics/endogeneity if diagnostics are credible
DEA plus regression	Bank efficiency	Positive/threshold effects in Ghana	Broadens performance beyond profitability
Logit/probabilistic models	Failure probability/default risk/crisis	Prudential relevance	Links diversity to resilience rather than accounting returns
Moderation/threshold models	ROA, risk, stability	Conditional effects	Consistent with critical-mass and contextual interpretations

Source: Authors

Table 6. Structured methodological appraisal of the retained evidence

Appraisal dimension	Overall reading	Interpretation for synthesis
Measurement clarity	Moderate	Most studies define gender diversity clearly, but few capture authority, committee role, or tenure.
Outcome validity	Moderate	ROA/ROE dominate; recent studies improve validity by adding efficiency, risk, disclosure, and failure outcomes.
Endogeneity treatment	Variable	System GMM and dynamic designs improve causal caution, while static models remain weaker.
Geographical coverage	Weak to moderate	Evidence is concentrated in Nigeria and Ghana; North Africa and Morocco remain underrepresented.
Theoretical integration	Moderate	Agency theory dominates; resource dependence and critical mass require more systematic integration.
Policy translation	Limited	Few studies evaluate regulatory reforms, quotas, disclosure rules, or board committee mandates directly.

Source: Authors

5. Discussion

The main contribution of this scoping review is to show that the apparent inconsistency of the literature is analytically meaningful. Mixed findings should not be treated as empirical noise. They reflect differences in geography, institutional context, measurement strategy, outcome definition, and econometric identification. The relationship between board gender diversity and bank performance is therefore conditional rather than automatic (Adams & Ferreira, 2009; Owen & Temesvary, 2018; Bhatia & Gulati, 2021; Koua & N'Gatta, 2023).

The distinction between descriptive representation and substantive influence provides the central interpretive key. Descriptive representation refers to the numerical presence of women on boards. Substantive influence refers to the capacity of women directors to affect monitoring, agenda-setting, committee deliberation, risk oversight, disclosure, and strategic decisions. Many studies measure the first but infer the second. This mismatch helps explain why simple percentage or dummy measures often generate unstable findings (Kanter, 1977; Adams & Ferreira, 2009; Owen & Temesvary, 2018; Hordofa & Ionascu, 2025).

Agency theory explains positive effects when women directors strengthen monitoring, reduce managerial discretion, and improve accountability. Resource dependence theory explains positive effects when women directors bring expertise, legitimacy, stakeholder knowledge, or external connections. Critical mass theory explains non-linear or weak effects when women remain isolated, lack committee access, or occupy positions without decision-making authority. The theories therefore operate at different levels and should be used in combination rather than as competing explanations (Jensen & Meckling, 1976; Fama & Jensen, 1983; Pfeffer & Salancik, 1978; Hillman et al., 2000; Kanter, 1977; Owen & Temesvary, 2018).

The review also shows that performance measurement strongly shapes conclusions. If performance is reduced to ROA and ROE, diversity is judged mainly through short-term profitability. If performance includes risk, failure probability, disclosure, efficiency, and resilience, the governance contribution of diversity becomes broader and more prudential. In banking, this broader lens is essential because the board's responsibility includes not only profitability but also soundness, risk discipline, and confidence in the financial system (Aebi et al., 2012; Gulamhussen & Santa, 2015; Ofori-Sasu et al., 2022; Ben Mim et al., 2025).

Geographical concentration limits external validity. Evidence from Nigeria and Ghana cannot be generalized mechanically to all African banking systems. Legal origin, regulatory quality, ownership concentration, listing requirements, gender norms, and financial-market depth differ across subregions. The absence of Morocco and the limited representation of North Africa and francophone Africa weaken the ability to draw continent-wide conclusions. Future work should therefore treat Africa as an internally heterogeneous research context rather than a single empirical category (Adeabah et al., 2019; Okoyeuzu et al., 2021; Othmani, 2021; Koua & N'Gatta, 2023; Hordofa & Ionascu, 2025).

The role of methods is equally decisive. Static models may capture associations but remain vulnerable to reverse causality and omitted variables. Dynamic panel estimators can partially address endogeneity, but their credibility depends on instrument validity and control of instrument proliferation. DEA shifts the question from profitability to efficiency. Logit and failure models shift attention toward stability and resilience. The method chosen therefore determines not only the precision of estimates but also the conceptual meaning of the outcome (Laeven & Levine, 2009; Pathan & Faff, 2013; Okoyeuzu et al., 2021; Bhatia & Gulati, 2021).

The critical mass argument requires careful interpretation. The reviewed evidence supports the idea that token female presence may not be sufficient, but it does not justify a universal threshold applicable to all banks. Thresholds may vary depending on board size, committee structure, regulatory environment, ownership form, and internal board culture. The future research question is therefore not simply how many women sit on the board, but when and how their participation becomes institutionally consequential (Kanter, 1977; Owen & Temesvary, 2018; Koua & N'Gatta, 2023; Hordofa & Ionascu, 2025).

Overall, the review suggests that board gender diversity should be interpreted as a governance capability embedded in institutional and organizational conditions. It becomes performance-relevant when numerical representation is accompanied by authority, expertise, committee participation, and boardroom influence. This conclusion shifts the research agenda from counting women directors to studying the mechanisms through which they affect banking governance (Adams & Ferreira, 2009; Gulamhussen & Santa, 2015; Ofori-Sasu et al., 2022; Ben Mim et al., 2025).

6. Limitations, implications and future research agenda

This review has several limitations. First, it relies on Scopus as a single database. Although Scopus offers broad coverage of peer-reviewed research in management, economics, finance, and banking, it may exclude relevant studies published in regional journals, professional outlets, francophone or Arabic-language sources, and institutional reports. This limitation is particularly important for North Africa and francophone Africa, where relevant research may circulate outside mainstream English-language indexing systems (Gusenbauer & Haddaway, 2020; Gusenbauer, 2022; Tricco et al., 2018).

Second, the corpus is small and methodologically heterogeneous. The review therefore does not estimate a pooled effect size and does not claim causal generalization. Its contribution is cartographic and interpretive. It identifies patterns, gaps, and methodological issues that should inform future systematic reviews, meta-analyses, or primary empirical studies when the evidence base becomes larger and more comparable (Arksey & O'Malley, 2005; Levac et al., 2010; Peters et al., 2020).

Third, the included studies vary in robustness. Some rely on small single-country samples or static panel models, while others use dynamic estimators, DEA, or probabilistic models. This variation limits direct comparison. The methodological appraisal included in this revised version is intended to make these differences visible without excluding studies that remain informative for mapping the field (Peters et al., 2020; Tricco et al., 2018; Bhatia & Gulati, 2021).

For regulators, the findings imply that gender-diversity reforms should not be limited to symbolic board appointments. Disclosure requirements should encourage banks to report not only the number of women directors but also their committee roles, independence, tenure, expertise, and leadership positions. For banks, the findings suggest that diversity becomes governance-relevant when women directors are integrated into audit, risk, governance, and strategy committees. For researchers, the findings call for stronger designs, better measures, and clearer theorization of mechanisms (Basel Committee on Banking Supervision, 2015; Adams & Ferreira, 2009; Ofori-Sasu et al., 2022).

Future research should prioritize five directions. First, African banking studies should expand beyond Nigeria and Ghana to include Morocco, North Africa, francophone Africa, and underrepresented subregions. Second, diversity should be measured through role-sensitive indicators rather than only proportions or dummy variables. Third, performance should be assessed as risk-adjusted and multidimensional, incorporating efficiency, stability, disclosure, and resilience. Fourth, studies should address endogeneity more systematically through dynamic models, quasi-experimental designs, or policy-shock analysis. Fifth, qualitative and mixed-method research should examine boardroom processes, deliberation, dissent, and committee influence (Peters et al., 2020; Bhatia & Gulati, 2021; Gusenbauer, 2022; Ben Mim et al., 2025; Hordofa & Ionascu, 2025).

Table 7. Prioritized future research agenda

Gap domain	What the literature currently does	Why this is still insufficient	Deeper analytical issue	Refined research question
Geographical concentration of evidence	Most studies are concentrated in Nigeria and Ghana, with much thinner evidence from North Africa.	This creates an evidence base shaped by a narrow institutional geography and weakens the external validity of conclusions for Africa as a whole.	The field implicitly treats African banking systems as comparable, while regulatory regimes, ownership structures, governance traditions, and gender norms vary substantially across subregions.	How does the effect of board gender diversity on bank performance differ across African subregions when regulatory environment, ownership concentration, and legal origin are taken into account?
Single-country dominance	A large share of studies uses single-country samples.	Single-country designs are useful for contextual depth, but they do not explain whether reported effects are country-specific or structurally generalizable.	What appears to be a "gender effect" may in fact be an institutional effect embedded in one national governance architecture.	To what extent is the relationship between board gender diversity and bank performance conditioned by country-level institutional quality, investor protection, and banking regulation?
Reduction of gender diversity to numerical presence	Most studies operationalize diversity through percentage of women or a dummy variable indicating at least one female director.	Such measures capture representation but not influence, authority, or participation in strategic decision-making.	The literature often confuses descriptive diversity with substantive governance power.	Does substantive female influence on boards, measured through position, tenure, committee membership, or leadership roles, explain bank outcomes better than simple numerical representation?
Weak attention to role differentiation	Only a limited number of studies distinguish between executive, non-executive, or committee-level female participation.	Female directors do not contribute to governance in identical ways; their influence depends on formal authority and access to information.	The unresolved question is not only whether women are present, but where they are located within the governance structure.	How do the effects of female executive directors, independent directors, and audit-committee members differ with respect to profitability, efficiency, and financial stability?
Narrow conception of financial performance	The literature remains dominated by ROA and ROE, with fewer studies examining efficiency, risk, default exposure, or stability.	In banking, performance cannot be reduced to profitability alone because risk allocation and resilience are central dimensions of value creation.	The field may be misidentifying "better performance" by privileging short-term returns over prudence and institutional resilience.	Does board gender diversity improve risk-adjusted bank performance rather than profitability alone, and does this effect become stronger under conditions of financial stress?
Lack of mechanism-based explanation	Many studies estimate direct associations between gender diversity and performance.	Direct-effect models say little about how governance outcomes are actually produced.	The causal chain remains underspecified: diversity may operate through risk discipline, disclosure quality, monitoring intensity, strategic orientation, or reputational effects.	Through which governance mechanisms does board gender diversity influence bank outcomes, and are these effects mediated by risk-taking, disclosure practices, or board monitoring quality?
Limited treatment of conditional effects	Some recent studies mention threshold effects or moderation, but this remains limited.	Linear specifications may obscure the possibility that diversity only matters under specific structural conditions.	The issue is not simply effect size, but whether the effect is contingent on critical mass, board size, ownership form, or institutional setting.	Is the relationship between board gender diversity and bank performance contingent on critical-mass thresholds, board structure, or ownership configuration?

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Endogeneity and identification weakness	A substantial part of the literature relies on static panel models; only some studies use System GMM or stronger identification strategies.	Without stronger identification, it remains unclear whether gender diversity affects performance or whether better-performing banks are simply more likely to appoint women.	The causal direction remains partially unresolved.	Does the estimated effect of board gender diversity remain stable after addressing reverse causality, unobserved heterogeneity, and selection effects through dynamic or quasi-experimental designs?
Limited temporal interpretation	Most studies use medium-length panels but rarely theorize timing.	Governance effects may not appear immediately; adaptation, board learning, and strategic influence may unfold over time.	The literature is largely static in interpretation even when panel data are used.	Are the effects of board gender diversity on bank performance immediate, delayed, or cumulative over time?
Underdeveloped theoretical integration	Agency theory is dominant, with occasional use of resource dependence theory and limited engagement with institutional or critical-mass perspectives.	No single framework adequately explains why findings vary across settings and outcomes.	Theoretical monocentrism prevents the field from explaining contradictory evidence.	Which multi-theoretical framework best explains when board gender diversity enhances monitoring, broadens strategic resources, or improves prudential decision-making in banking?
Board composition without board process	Most studies focus on structural board variables rather than boardroom processes.	Composition alone does not reveal whether female directors actually shape deliberation, dissent, agenda-setting, or strategic oversight.	The literature privileges observable board attributes over the internal processes through which governance effects emerge.	How do boardroom processes mediate the relationship between female board representation and financial decision-making in banks?
Weak policy translation	The literature often reports association patterns but rarely evaluates governance reforms or diversity policies.	Without policy-oriented analysis, it remains difficult to infer whether mandatory quotas, soft targets, or disclosure requirements alter bank outcomes.	The field stops at diagnosis and rarely reaches institutional design.	Do gender-diversity regulations, quota regimes, or disclosure mandates alter the relationship between female board representation and bank performance in emerging banking systems?

Source: Authors

7. Conclusion

This scoping review shows that board gender diversity matters for banking governance, but not in a mechanical or universally positive manner. Its relationship with bank performance depends on institutional context, measurement strategy, board structure, performance definition, and the extent to which numerical representation becomes substantive influence (Adams & Ferreira, 2009; Owen & Temesvary, 2018; Bhatia & Gulati, 2021).

The African evidence remains geographically and methodologically fragmented. Nigeria and Ghana dominate the empirical landscape, while North Africa and Morocco remain underrepresented or absent in the retained corpus. The literature also remains heavily dependent on proportional measures of women directors and profitability indicators such as ROA and ROE, although recent studies increasingly examine efficiency, risk, disclosure, stability, and failure probability (Adeabah et al., 2019; Okoyeuzu et al., 2021; Othmani, 2021; Koua & N'Gatta, 2023; Hordofa & Ionascu, 2025).

The main implication is that future research should move from asking whether women on boards affect bank performance to asking when, how, through which governance mechanisms, and under what institutional conditions they do so. This shift requires more refined measures of female influence, stronger identification strategies, broader performance indicators, and deeper attention to African institutional heterogeneity. By clarifying these issues, the review provides a structured agenda for the next generation of research on gender diversity and bank governance in Africa (Kanter, 1977; Gulamhussen & Santa, 2015; Owen & Temesvary, 2018; Ofori-Sasu et al., 2022).

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