

Developing an Integrated Risk Governance Framework for Saudi Holding Companies in Support of Vision 2030

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Abstract- Saudi holding companies are increasingly central to portfolio investment, sectoral diversification, localization, and large-scale transformation under Vision 2030. Their governance challenge is distinctive: while risks originate within individual subsidiaries, value destruction can propagate through shared financing, brands, digital infrastructure, suppliers, executives, and strategic dependencies at the group level. This review develops an integrated risk governance framework tailored to this multi-entity context. An integrative review approach synthesizes research on enterprise risk management, board governance, organizational resilience, environmental, social, and governance (ESG) factors, digital risk, supply-chain resilience, and Saudi corporate governance. The synthesis demonstrates that conventional subsidiary-by-subsidiary risk registers are inadequate when the parent company must understand risk concentration, contagion, correlated exposures, and strategic trade-offs across a portfolio. Effective governance therefore requires five interconnected capabilities: board-level risk direction and appetite; a group risk office capable of aggregating and challenging exposures; clearly retained subsidiary ownership of operational risks; independent assurance; and a continuous decision loop linking risk information to capital allocation, strategy, and learning. Saudi evidence further indicates that board structure, audit and sustainability mechanisms, institutional quality, disclosure, and investor expectations influence the credibility of governance arrangements. The proposed framework aligns these findings with Vision 2030 priorities by positioning risk governance as an infrastructure for disciplined growth rather than mere compliance. It provides a research agenda and practical design principles for holding-company boards, group chief risk officers, subsidiary leaders, regulators, and investors seeking resilience without sacrificing entrepreneurial autonomy.

Keywords: risk governance; enterprise risk management; holding companies; Saudi Arabia; Vision 2030; corporate governance; resilience; ESG

I. INTRODUCTION

Saudi Arabia's economic transformation has expanded the strategic role of large corporate groups, investment platforms, and holding companies that allocate capital across multiple sectors. Vision 2030 places diversification, private-sector development, knowledge creation, investment attraction, localization, digitalization, and sustainability at the center of national transformation. Earlier analysis of the Kingdom's transition from an oil-based model emphasized the importance of human capital, innovation, information and communication technology, education, and employment as mutually reinforcing foundations of a knowledge economy (Nurunnabi, 2017). More recent evidence also shows that institutional quality and trade openness influence investment inflows, reinforcing the economic importance of credible governance arrangements (Samargandi et al., 2022). For holding companies, these national objectives create opportunities while simultaneously increasing exposure to execution, financing, technology, human-capital, regulatory, environmental, supply-chain, and reputational risks.

The core governance challenge is not simply to identify more risks. It is to govern interdependence. A diversified parent can appear protected by portfolio breadth while actually accumulating common vulnerabilities through shared lenders, enterprise systems, contractors, key executives, geographic concentrations, or policy assumptions. Subsidiaries may have effective local controls yet still generate group-level concentrations that no single management team can observe. Conversely, excessive centralization can suppress accountability and slow commercial decisions. The relevant design question is therefore how a holding company can establish enterprise-wide direction, comparable risk information, and escalation rights while preserving the operating knowledge and ownership that reside in subsidiaries.

Enterprise risk management research provides part of the answer. ERM is intended to connect risks across categories and integrate them with strategy, rather than manage hazards

in isolated silos (Bromiley et al., 2015; Anton & Afloarei Nucu, 2020). Empirical studies associate more developed ERM systems with stronger performance in some contexts, but they also show that outcomes depend on organizational design rather than the formal presence of an ERM program (Florio & Leoni, 2017; Lechner & Gatzert, 2018). Board-level risk committees can strengthen the relationship between ERM effectiveness and performance by improving oversight and challenge (Malik et al., 2020).

A second body of evidence concerns governance architecture. Risk oversight depends on how authority is allocated among boards, executives, committees, assurance functions, and business managers. Banking research shows that stronger risk controls can materially affect risk-taking behavior (Ellul & Yerramilli, 2013), while broader evidence links risk governance and board effectiveness to organizational performance (Kacem & El Harbi, 2022). In Saudi Arabia, researchers have studied board composition, managerial incentives, audit structures, and governance mechanisms primarily at the listed-firm level (Al-Faryan, 2021; Habtoor, 2022; Boshnak et al., 2023). Holding companies require an additional layer because the parent board governs both its own corporate risks and the systemic interactions among controlled entities.

This paper addresses that gap by developing an integrated risk governance framework tailored to Saudi holding companies and explicitly connected to Vision 2030. It treats risk governance as the institutional mechanism that makes strategic objectives, risk appetite, subsidiary autonomy, portfolio aggregation, assurance, and learning mutually consistent. The contribution is conceptual but practice-oriented: rather than proposing another generic risk taxonomy, the review explains which governance capabilities must exist, how they should interact, what information should move between levels, and how the resulting architecture can support resilient transformation.

II. AIM OF THE STUDY

The study aims to develop a theoretically grounded, context-sensitive integrated risk governance framework for Saudi holding companies that supports Vision 2030-aligned growth while improving oversight of portfolio interdependencies, strategic execution, resilience, and accountability. The framework bridges three literatures often treated separately: enterprise risk management, corporate governance, and resilience. It also incorporates Saudi evidence on boards, ESG

disclosure, investment attractiveness, and institutional quality so that governance recommendations reflect the Kingdom's corporate environment rather than being imported uncritically from single-entity models.

III. RESEARCH OBJECTIVES

Five objectives guide the review. First, to synthesize the principal theoretical and empirical findings on ERM, risk governance, board oversight, resilience, digital risk, ESG, and portfolio interdependence. Second, to identify the governance problems that become more consequential when risk is distributed across a parent and multiple subsidiaries. Third, to assess how Saudi corporate-governance evidence and Vision 2030 priorities alter the design requirements of a holding-company risk system. Fourth, to specify an integrated architecture connecting board direction, group risk coordination, subsidiary ownership, assurance, and decision rights. Fifth, to derive testable propositions and practical implications.

IV. RESEARCH QUESTIONS

The review addresses four questions. RQ1 asks which risk-governance capabilities are most consistently supported by contemporary ERM and governance research. RQ2 asks how those capabilities should be allocated between a Saudi holding-company board, group functions, and subsidiary management. RQ3 asks how digital transformation, ESG expectations, supply-chain disruption, and Vision 2030 execution change the portfolio-level risk agenda. RQ4 asks which information flows, escalation mechanisms, and assurance arrangements can convert dispersed subsidiary risk information into timely group-level strategic decisions without undermining local accountability.

V. REVIEW METHODOLOGY

An integrative review design was adopted because the research problem spans empirical corporate-governance studies, conceptual ERM scholarship, resilience research, sustainability studies, and Saudi-specific evidence. Integrative reviews are appropriate when a research question requires combining mature and emerging streams rather than estimating a single pooled effect; they can generate new conceptual frameworks from heterogeneous evidence when search, appraisal, and synthesis decisions are transparent (Snyder, 2019). Reporting principles were informed by PRISMA 2020, particularly its emphasis on explicit eligibility

criteria, reproducible search logic, transparent screening, and separation of identification from synthesis (Page et al., 2021). The review does not present a PRISMA flow count because no defensible historical screening count was retained across the iterative conceptual search. Numerical screening totals are therefore deliberately omitted rather than reconstructed.

The search strategy targeted peer-reviewed journal research discoverable through multidisciplinary indexing and major publisher platforms, including ScienceDirect, SpringerLink, Emerald Insight, Wiley Online Library, Taylor & Francis Online, SAGE Journals, and MDPI. Search terms were combined around five concept families: “enterprise risk management” or “risk governance”; “holding company,” “corporate group,” “subsidiary,” or “portfolio”; “board,” “risk committee,” “audit committee,” or “chief risk officer”; “Saudi Arabia,” “Vision 2030,” or “Saudi corporate governance”; and emerging exposures including “ESG,” “digital transformation,” “cybersecurity,” “resilience,” and “supply chain.” We used backward and forward citation tracing selectively to retain foundational studies that explain mechanisms still relied upon by recent scholarship. DOI metadata and bibliographic details for the final reference set were checked against publisher pages or Crossref-resolving records.

The primary time emphasis was 2020-2025, while earlier work was retained only when it provided foundational theory, established measures, or Saudi context not replicated in newer studies. Inclusion required peer-reviewed journal publication, direct relevance to organizational risk governance or Saudi corporate governance, and sufficient methodological or conceptual detail to support comparison. We excluded studies focused solely on technical risk measurement without governance implications, non-peer-reviewed commentary, duplicate records, inaccessible bibliographic claims, and sources whose DOI or publication identity could not be verified. Because holding-company-specific Saudi research is sparse, we included evidence from listed Saudi firms, international banks, and general corporate samples when the governance mechanism was transferable; we treated transferability analytically rather than assuming it.

The quality assessment considered six dimensions: relevance to the research questions; clarity of constructs and governance mechanisms; appropriateness of research design; transparency of sampling and measurement; robustness of interpretation; and contextual transferability to diverse groups. Empirical findings were given greater evidential weight when

they used longitudinal or panel designs, addressed endogeneity, or triangulated governance features with performance or disclosure outcomes. Conceptual studies were retained when they offered clear causal logic that could be compared against empirical work. No numerical quality score was imposed because such scoring would create false commensurability across qualitative, conceptual, and econometric studies.

To strengthen traceability, the synthesis also distinguished evidence about statistical association from evidence about governance mechanisms. The synthesis treated an observed association as support for plausibility, not as a universal design rule. The authors placed greater interpretive weight on findings that explained how authority, information quality, challenge, incentives, escalation, or assurance could alter organizational behavior. Where evidence came from banks or non-Saudi settings, transfer to holding companies was justified only when the underlying mechanism was structurally comparable. This discipline reduces the risk of importing institutional assumptions that do not fit diversified Saudi groups and makes each proposed framework component open to subsequent empirical testing, modification, or rejection in future research.

Synthesis proceeded in three stages. First, evidence was coded into board direction, organizational architecture, risk information, portfolio aggregation, assurance, resilience, digital risk, ESG, and Saudi institutional context. Second, convergent and conflicting findings were compared to identify mechanisms rather than merely count positive or negative associations. Third, those mechanisms were translated into a multi-level holding-company design in which authority, data, challenge, escalation, and assurance are explicitly allocated.

VI. THEMATIC LITERATURE REVIEW AND CRITICAL ANALYSIS

6.1 From ERM to risk governance

The ERM literature has moved beyond the idea that a firm can improve control merely by consolidating risk registers. Reviews describe ERM as an organization-wide process, consistent with organizational dynamics identified by Arena et al. (2010), intended to integrate heterogeneous exposures with strategic decision-making. Still, they also note substantial inconsistency in definitions, implementation, and measurement (Anton & Afloarei Nucu, 2020). Bromiley et al. (2015) argue that ERM becomes meaningful when it changes

how senior managers understand interconnected risks and strategic choices. This is especially important for holding companies because correlations between subsidiaries may dominate the significance of any one subsidiary's residual risk.

Performance evidence is broadly supportive but conditional. Florio and Leoni (2017) found that more sophisticated ERM implementation was associated with stronger performance in Italian listed firms. In contrast, Lechner and Gatzert (2018) showed that ERM determinants and value effects vary with organizational characteristics. Malik et al. (2020) add that a board-level risk committee can strengthen ERM's contribution to performance. Together, these studies suggest that governance quality, not formal adoption, drives the value mechanism. A Saudi holding company therefore needs an architecture that makes risk appetite, information, challenge, and capital decisions mutually reinforcing.

6.2 Board direction, committees, and risk ownership

Risk governance starts with allocation of authority. The parent board should own the group's risk-governance charter, approve appetite and tolerance boundaries, and challenge whether strategy remains feasible under adverse scenarios. Evidence from U.S. bank holding companies shows that strong risk controls can constrain excessive risk-taking, demonstrating that organizational placement and authority matter (Ellul & Yerramilli, 2013). Kacem and El Harbi (2022) similarly connect effective boards and risk governance with bank performance. Although regulated banks differ from industrial holdings, the mechanism is transferable: risk oversight gains influence when it is structurally connected to the board and empowered to challenge revenue-generating units.

Saudi corporate-governance evidence reinforces the importance of board architecture while cautioning against simplistic prescriptions. Al-Faryan (2021) finds that board composition and performance relationships are endogenous, meaning that governance design cannot be interpreted as a one-way cause of outcomes. Habtoor (2022) shows that board attributes matter in Saudi banks under evolving governance regulations, while Boshnak et al. (2023) identify changes in the relationship between governance mechanisms and firm performance around the COVID-19 period. These findings favor adaptive governance: boards need minimum structural safeguards, but information quality, expertise, meeting

behavior, and challenge are likely more consequential than formal independence ratios alone.

The same logic applies to subsidiary ownership. Business management should remain the first owner of operational and commercial risk because it controls the relevant decisions. A group risk office should not become a substitute management layer. Its role is to define common taxonomies and data standards, aggregate exposures, facilitate scenario analysis, detect concentrations, and escalate cross-entity threats. The parent board and group executive committee then use that portfolio view to set boundaries and allocate capital.

6.3 Portfolio interdependence, contagion, and resilience

Holding-company risk is a network problem. Diversification can reduce idiosyncratic exposure while creating dependencies through centralized treasury, shared technology platforms, common suppliers, guarantees, brands, and leadership. Standard heat maps typically assess probability and impact separately for each risk and can therefore obscure common-cause failures. A portfolio approach should instead ask how shocks co-move, where liquidity or covenant stress concentrates, which subsidiaries depend on the same third parties, and which strategic initiatives compete for the same scarce capabilities.

Resilience research strengthens this systems perspective. Dahmen (2023) argues that ERM contributes to organizational resilience when it is supported by learning, permeability, purpose, leadership, trust, and empowered teams. Ivanov and Dolgui (2020) similarly frame supply-chain resilience as a question of viability across interconnected networks rather than isolated nodes. Applied to a holding company, these insights imply that continuity cannot be governed subsidiary by subsidiary. Group-level stress testing should include simultaneous disruptions, second-order effects, recovery sequencing, and the possibility that one subsidiary's protective action transfers risk to another.

6.4 Digital, cyber, and information risk

Vision 2030-aligned organizations are increasingly data intensive. Digital transformation creates efficiency and new business models, yet it also links subsidiaries through cloud providers, shared applications, data lakes, automation, and digital identity. Al-Sartawi (2020) argues that information technology governance and cybersecurity require board-level attention rather than confinement to technical functions. Huang et al. (2023) find that digital transformation can

influence idiosyncratic risk through corporate-governance channels. The implication is that technology risk should be governed as a strategic exposure: boards need indicators that connect cyber events and data failures to revenue, safety, legal compliance, reputation, and portfolio continuity.

For a holding company, the central issue is architectural concentration. A shared platform can reduce cost while creating a single point of failure. Group risk governance should therefore map critical digital services across subsidiaries, establish minimum cyber-control baselines, define incident escalation thresholds, and require coordinated recovery exercises. Local technology teams retain implementation responsibility, but group oversight is needed for common identity, cloud, third-party, and data risks. This reflects the proposed principle of “centralize standards and aggregation, decentralize ownership and execution.”

6.5 ESG, sustainability, and stakeholder risk

ESG research has shifted governance debates from voluntary reputation management toward measurable strategic and financing consequences. Broadstock et al. (2021) show that ESG performance can influence resilience during financial stress, while Chairani and Siregar (2021) connect ERM, financial performance, firm value, and ESG performance. In Saudi Arabia, Firmansyah et al. (2023) find that the effects of ESG disclosure on performance are heterogeneous across metrics and ESG components, which cautions against treating ESG scores as a direct proxy for value creation. Umar et al. (2024) further show that governance mechanisms affect Saudi ESG disclosure in different ways.

Saudi studies are especially relevant to implementation. Alwadani et al. (2024) report positive associations between sustainability committees, separate sustainability reporting, external assurance, and environmental performance. Ebaid (2022) finds that corporate-governance mechanisms affect corporate social responsibility disclosure in an emerging-market setting, while Alregab (2022) links ESG performance with foreign ownership in Saudi Arabia. These findings support integrating material ESG risks into mainstream governance rather than maintaining a parallel sustainability process. The parent board should determine which environmental, social, governance, and climate-related exposures are financially or strategically material to the portfolio and then connect those exposures to appetite, capital allocation, due diligence, and assurance.

6.6 Saudi institutional context and Vision 2030

Saudi holding companies operate within a rapidly evolving governance and investment environment. Alregab (2023) finds that corporate governance affects Saudi listed firms' ability to attract foreign investment, consistent with Samargandi et al. (2022), who find that institutional quality matters for FDI inflow. These findings matter because risk governance affects more than internal control; it can influence the firm's credibility with lenders, partners, minority investors, and international counterparties. Transparent escalation, consistent disclosure, and credible assurance can therefore support access to capital needed for diversification.

Saudi board research also indicates that governance effects are contingent. Bagais and Aljaaidi (2020) associate corporate-governance attributes with firm performance, while Al-Matari (2022) shows that chairperson characteristics can influence corporate performance. Bazhair and Sulimany (2023) demonstrate that family ownership can moderate the relationship between board diversity and financial performance. Holding companies may combine state-linked, family-owned, listed, private, joint-venture, and foreign-partner entities, so a uniform committee template is unlikely to fit every subsidiary. The parent needs group-wide minimum standards and a documented process for proportional adaptation based on ownership, regulation, risk criticality, and strategic significance.

The resulting evidence base supports a layered model summarized in Table 1. Its central conclusion is that integration does not mean centralizing every risk decision. Integration means creating common strategic boundaries, comparable data, explicit escalation rights, portfolio aggregation, and assurance while leaving day-to-day risk-taking with accountable businesses. That balance is essential for Vision 2030 because transformation requires both speed and control.

Table 1. Integrated risk governance layers for Saudi holding companies

Governance layer	Primary accountability	Core instruments	Portfolio value
Holding-company board	Set strategic risk direction and challenge management	Risk appetite; reserved matters; scenario review; escalation thresholds	Aligns risk taking with strategy and capital capacity
Group risk office	Create comparable information and portfolio insight	Common taxonomy; KRIs; concentration map; stress tests; emerging-risk process	Detects correlations, contagion, and common-cause dependencies
Subsidiary boards and management	Own business risks and controls	Local limits; risk registers; controls; incident reporting; recovery plans	Preserves decision proximity and operational accountability
Independent assurance	Test reliability of controls, data, and governance	Internal audit; compliance; external audit; specialist assurance	Increases confidence in reported risk positions and remediation
Strategic overlay	Connect risk with investment and transformation decisions	Capital allocation; M&A due diligence; portfolio reviews; performance incentives	Turns risk governance into disciplined growth infrastructure

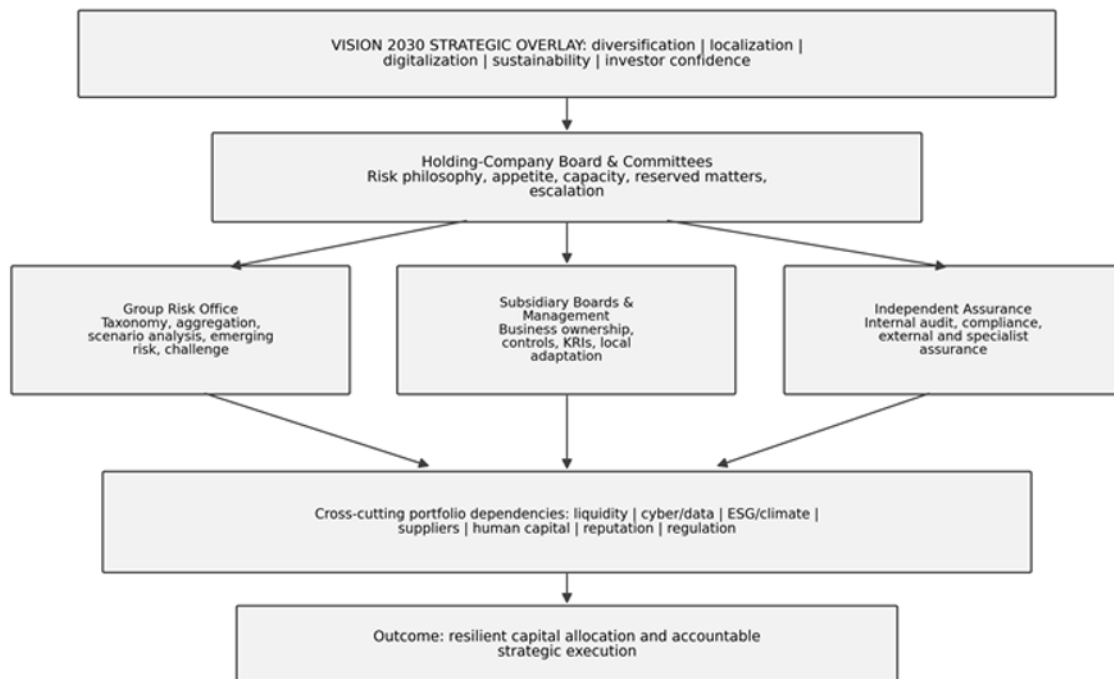


Figure 1. Integrated risk governance architecture for Saudi holding companies

VII. DISCUSSION: AN INTEGRATED RISK GOVERNANCE FRAMEWORK

The proposed framework has four operating layers and one strategic overlay. At the top, the holding-company

board and its relevant committees define the group's risk-governance philosophy, appetite, capacity, reserved matters, and escalation thresholds. Appetite should be expressed through a combination of quantitative limits and qualitative principles linked to

strategy. A single aggregate “risk score” is inappropriate because liquidity, safety, cyber, regulatory, and reputational exposures have different loss distributions and non-financial consequences. The board’s task is to make explicit where the group is willing to accept volatility to pursue Vision 2030-aligned opportunities and where it has near-zero tolerance.

The second layer is a group risk office led by a sufficiently independent senior executive. This function maintains the common taxonomy, data definitions, concentration map, emerging-risk process, and scenario library. It should challenge subsidiary assessments and aggregate them across legal entities, but it should not own the underlying risks. Its distinctive responsibility is to identify what local registers cannot see: correlated earnings shocks, shared contractors, cross-guarantees, technology dependencies, refinancing clusters, reputational spillovers, and competing demands on scarce skills. Figure 1 presents this architecture as an information-and-accountability system rather than a hierarchy of control.

The third layer comprises subsidiary boards and management teams. They translate group appetite into business-specific limits, own controls, monitor key risk indicators, and escalate deviations. This protects the decision proximity required in fast-moving markets. However, autonomy is conditional on transparency. A subsidiary that withholds emerging problems or uses incomparable definitions weakens the parent’s fiduciary capacity. Group policies should therefore specify a minimum risk data set, mandatory incident reporting, scenario participation, and events that trigger immediate escalation.

The fourth layer is assurance. Internal audit, compliance, financial control, external audit, and specialized independent assurance should test whether reported risk positions and controls are reliable. Assurance plans should be risk-based across the portfolio, not mechanically repeated in every subsidiary. This is particularly important for ESG and digital controls, where specialized assurance may reveal weaknesses that conventional financial audit

scopes do not capture. The positive Saudi evidence on independent sustainability assurance and environmental performance supports this broader assurance model (Alwadani et al., 2024).

The strategic overlay links risk governance to capital allocation, transactions, and performance management. Major acquisitions, joint ventures, divestments, and mega-project commitments should include a portfolio impact assessment rather than a stand-alone deal risk review. A transaction that appears attractive in isolation may intensify existing exposure to a supplier, country, technology, customer, or funding source. Conversely, a project with moderate standalone returns may create valuable resilience by diversifying capabilities or cash-flow drivers. Risk governance therefore becomes part of investment logic, not a gate applied after commercial decisions are substantially fixed.

This framework also clarifies the distinction between risk appetite and risk culture. Appetite is an approved boundary; culture determines how people behave when the boundary is ambiguous or inconvenient. Organizational resilience research highlights trust, learning, and empowered teams as critical to crisis response (Dahmen, 2023). Accordingly, a Saudi holding company should assess whether incentives reward early escalation, whether bad news travels quickly, and whether executives can challenge strategic assumptions without being treated as obstacles to delivery. These behavioral indicators deserve board attention alongside quantitative limits.

Figure 2 translates the architecture into a continuous governance cycle: strategy and appetite shape risk sensing; subsidiary information is aggregated into a portfolio view; the board and executives challenge scenarios and make capital or control decisions; assurance tests implementation; and lessons update strategy and appetite. The cycle prevents risk reporting from becoming a quarterly compliance ritual. It also creates a practical mechanism for adaptation as Vision 2030 programs, technologies, regulations, partnerships, and markets evolve.

Table 2. Illustrative board-level questions and evidence for the proposed framework

Framework component	Illustrative board question	Representative metric/evidence
Risk appetite	Where are we intentionally accepting volatility, and where is tolerance near zero?	Limit utilization; appetite breaches; loss capacity; covenant headroom
Portfolio aggregation	Which exposures become material only when subsidiaries are combined?	Shared counterparties; refinancing clusters; correlated EBITDA stress; cross-guarantees
Digital resilience	Which shared technologies create single points of failure?	Critical-service dependency map; recovery test results; privileged-access exceptions
ESG and stakeholder risk	Which sustainability issues are financially or strategically material?	Assured ESG metrics; environmental incidents; workforce indicators; regulatory exposure
Escalation culture	Does bad news reach the parent early enough to act?	Time to escalate; repeat incidents; overdue remediation; whistleblowing themes
Assurance	Can the board rely on risk and control information?	Audit coverage of critical risks; control-test failure rate; remediation closure quality

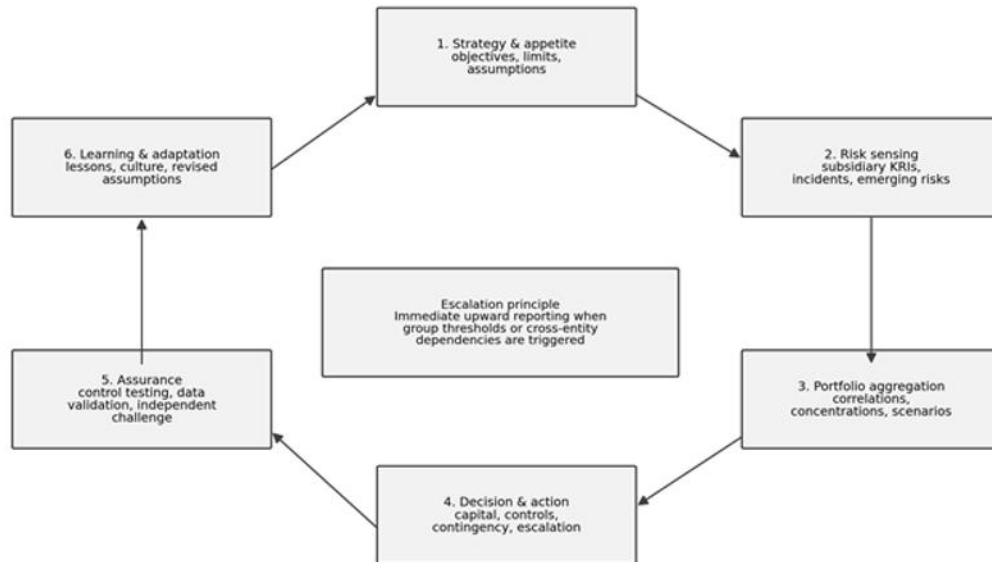


Figure 2. Continuous risk governance decision cycle and escalation logic

VIII. RESEARCH GAPS AND FUTURE RESEARCH

The literature exposes several gaps. First, little direct empirical work examines risk governance in Saudi holding companies. Most Saudi studies use listed firms or banks as the unit of analysis, so they cannot observe parent-subsidiary information asymmetry, contagion, or portfolio concentration. Future studies should collect matched parent and subsidiary data and

test whether group-level risk aggregation improves decision quality, capital efficiency, or loss avoidance. Second, ERM research still relies heavily on adoption proxies. Studies should measure maturity through observable capabilities such as scenario coverage, escalation speed, data comparability, board challenge, and integrating risk with capital allocation. Third, digital and ESG risks are commonly examined as separate governance domains even though they interact with strategy, supply chains, financing, and

reputation. Research should test multi-risk scenarios and common-cause dependencies.

Fourth, governance effects are likely contingent on ownership. Saudi groups may be state-linked, family-controlled, publicly listed, private, or joint ventures. Bazhair and Sulimany (2023) already show that ownership can moderate governance-performance relationships, suggesting that holding-company research should compare ownership forms rather than assume one optimal structure. Fifth, longitudinal research is needed to distinguish governance improvements from reverse causality, as Al-Faryan (2021) shows. Natural experiments around regulatory changes, restructurings, acquisitions, and major disruptions could provide stronger causal evidence.

Finally, future research should operationalize the proposed framework through a validated risk-governance maturity index. A useful index would measure board direction, portfolio aggregation, subsidiary ownership, assurance, risk culture, digital resilience, ESG integration, and linkage to strategic decisions. Such an instrument could enable benchmarking across Saudi sectors and test whether higher maturity supports investor confidence, resilience, and Vision 2030-related strategic execution.

IX. PRACTICAL, MANAGERIAL AND POLICY IMPLICATIONS

For holding-company boards, the first implication is to govern risk at portfolio level. Board packs should move beyond lists of top risks and show concentrations, interdependencies, trend changes, scenario results, and appetite breaches. The board should reserve decisions that can create group-wide exposure, including guarantees, major leverage changes, critical platform dependencies, acquisitions, and commitments with material reputational or regulatory consequences.

For management, the framework implies a federated operating model. A group chief risk officer should own standards, aggregation, challenge, and escalation, while subsidiary executives own business risks and controls. Performance incentives should penalize concealed or repeatedly unresolved control failures

and reward early escalation where it protects group value. Technology should support a common data model, but dashboards should not replace judgment; data quality, scenario design, and narrative explanation remain essential.

For audit and assurance functions, planning should follow cross-portfolio materiality. Shared-service centers, identity platforms, treasury arrangements, major contractors, and sustainability data may warrant group-wide assurance because one weakness can affect many entities. For investors and lenders, clearer portfolio-risk disclosure can improve understanding of how diversification is governed, particularly where subsidiaries share funding or strategic dependencies. Policymakers and regulators can support better practice by encouraging proportionate group-wide governance expectations rather than treating each legal entity in isolation. Guidance could emphasize group risk appetite, related-party and guarantee exposures, cyber dependencies, sustainability assurance, and parent-subsidiary escalation. Strong governance can also support investment attractiveness: Alregab (2023) and Samargandi et al. (2022) indicate that governance and institutional quality matter to foreign investment. In this sense, integrated risk governance can contribute to Vision 2030 by making ambitious corporate transformation more investable, transparent, and resilient.

X. LIMITATIONS

This review is conceptual and does not test the proposed framework against proprietary data from Saudi holding companies. Its integrative design combines heterogeneous methods and sectors, so evidence strength is uneven and transferability requires judgment. The absence of a defensible retained record of iterative screening totals means the authors report no numerical PRISMA flow. In addition, published research may underrepresent failed governance arrangements and private-group practices. The framework should therefore be treated as a testable design model rather than a validated Saudi standard. Future field studies, interviews, surveys, archival analyses, and comparative case research are required before causal claims can be made about performance effects.

XI. CONCLUSION

Saudi holding companies need a risk-governance model that can support transformation at the speed and scale implied by Vision 2030. The literature reviewed here indicates that effective ERM is not created by adding more risk registers, committees, or policies. Its value arises when governance connects strategy, appetite, information, challenge, ownership, assurance, and learning. That requirement is intensified in a holding company because material exposure can emerge from interactions among subsidiaries even when each entity appears locally compliant.

The proposed framework addresses that problem through a layered but federated architecture. The parent board sets strategic risk direction and reserved boundaries; the group risk office creates a portfolio view and challenges concentrations; subsidiary leaders retain ownership of business risks; assurance validates the reliability of controls and reporting; and a continuous decision cycle feeds experience back into strategy and capital allocation. Cross-cutting digital, ESG, supply-chain, financing, and reputational risks are treated as portfolio dependencies rather than specialist silos.

This approach also clarifies risk governance's contribution to Vision 2030. Governance is not only defensive. By making uncertainty visible, comparable, and discussable, it can improve the quality of investment decisions, protect strategic flexibility, support investor confidence, and help organizations absorb shocks without abandoning long-term objectives. The main research priority is now empirical: Saudi scholars and practitioners should test whether the proposed capabilities produce measurable differences in resilience, capital efficiency, escalation quality, and strategic execution across ownership forms and sectors. An evidence-based maturity model could then convert the framework from a conceptual design into a benchmark for governance practice.

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