

Finance as a Resilience Integrator: Linking PSPK 1, ISO 22301 and Integrated GRC from Strategic Uncertainty to Decision Superiority - A Review

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ABSTRACT: Organizations increasingly operate under conditions in which uncertainty, sustainability pressures, operational disruption, regulatory change, technological interdependence, and financial volatility interact rather than occur independently. This qualitative literature review examines how finance can become an integrating mechanism for organizational resilience by connecting sustainability-related financial disclosure, business continuity management, enterprise risk management, governance, compliance, and strategic decision-making. Particular attention is given to Indonesia's PSPK 1, its conceptual relationship with IFRS S1, ISO 22301 business continuity management, and integrated Governance, Risk and Compliance (GRC). Drawing on peer-reviewed literature published predominantly from 2020 to 2026 and authoritative standard-setting documents, the review identifies six interconnected themes: uncertainty requires organizational sensemaking; sustainability risks require financial translation; business continuity converts risk knowledge into executable capability; integrated GRC establishes ownership and assurance; finance connects risks to liquidity, capital allocation, and performance; and organizational resilience depends on continuous learning rather than static compliance. The article proposes a Finance-Led Resilience Integration Loop (FLRIL) comprising six recurring stages: Sense and Frame, Govern and Prioritize, Stress and Continue, Allocate and Execute, Disclose and Assure, and Learn and Adapt. The synthesis suggests that decision superiority arises not from possessing more information, but from integrating sufficiently reliable information with governance, continuity capability, financial resources, and timely action. Practical recommendations are provided for organizations preparing for PSPK 1 implementation and seeking to move from disclosure readiness toward enterprise-wide resilience readiness.

KEYWORDS: Financial Resilience; Organizational Resilience; PSPK 1; IFRS S1; ISO 22301; Business Continuity Management; Integrated Governance, Risk and Compliance; Enterprise Risk Management; Sustainability-Related Financial Disclosure; Decision Superiority.

JEL Classification: G32; G34; M41; M14; Q56.

1. INTRODUCTION

1.1 Strategic Uncertainty and the Emerging Resilience Imperative

Organizations no longer face risk as a collection of isolated and relatively predictable events. Climate transition, geopolitical tensions, cyber threats, technological dependencies, supply-chain fragmentation, regulatory changes, public-health emergencies, commodity-price shocks, and social expectations may reinforce one another and generate nonlinear consequences. In such an environment, strategic management resembles decision-making in a "fog of war": leaders rarely possess complete information, probabilities are difficult to estimate, causal relationships are unstable, and information that appears irrelevant at one moment may become strategically decisive at another. The distinction between measurable risk and deeper uncertainty is

consequently important. Predictive approaches remain valuable when probabilities and relationships can reasonably be estimated, but non-predictive approaches, strategic flexibility, scenario analysis, and adaptive decision processes become increasingly necessary as uncertainty becomes less mitigable through additional information alone (Packard and Clark, 2020; Stanton and Roelich, 2021; Bouhaleb and Smida, 2020).

The organizational challenge is therefore not merely to forecast disruptions more accurately. It is to develop capabilities for sensing weak signals, interpreting ambiguous information, anticipating plausible consequences, mobilizing resources, maintaining critical operations, and learning when assumptions prove wrong. Sensemaking research demonstrates that organizations can fail not because data are entirely absent, but because available signals are interpreted

through inappropriate frames, information remains fragmented across groups, or organizational actors cannot develop a sufficiently shared interpretation to support coordinated action (Kilskar, Danielsen and Johnsen, 2020; Nowling and Seeger, 2020; Stephens et al., 2020). Resilience must consequently incorporate cognitive and informational capabilities alongside financial, operational, technological, and governance resources.

Contemporary organizational-resilience scholarship similarly moves beyond the narrow idea of “bouncing back” after a disruption. Duchek (2020) conceptualizes resilience through anticipation, coping, and adaptation, while Hillmann and Guenther (2021) show that organizational resilience is best treated as a multidimensional capability rather than a single outcome. More recent research reinforces the importance of distinguishing business continuity, operational resilience, and organization-wide resilience: continuity is concerned strongly with maintaining or restoring critical activities, whereas organizational resilience additionally encompasses adaptation, renewal, and potentially transformation after disruption (Galaitis et al., 2023; De Matteis, Elia and Del Vecchio, 2023; Steen, Haug and Patriarca, 2024).

This broader conception is particularly significant for finance. Disruptions that initially appear operational, environmental, technological, or reputational eventually manifest through financial pathways such as declining revenues, higher operating expenses, increased working-capital requirements, asset impairment, contractual penalties, supply interruption, costlier insurance, diminished access to finance, or a higher cost of capital. During the COVID-19 shock, firms with stronger balance-sheet characteristics, greater liquidity, and less vulnerability to certain supply-chain exposures were demonstrably better positioned to absorb severe market stress, illustrating the close connection between financial flexibility and corporate resilience (Ding et al., 2021; Albuquerque et al., 2020; Cheema-Fox et al., 2021).

1.2 Sustainability Disclosure as Strategic Information

The rise of sustainability-related financial disclosure adds another dimension to this resilience problem. Sustainability reporting historically developed through multiple and sometimes competing rationales, ranging from stakeholder accountability and corporate responsibility to investor-oriented financial materiality. This plurality helps explain continuing debates over single and double materiality, standard convergence, interoperability, and the relationship between sustainability reporting and conventional financial reporting (Christensen, Hail and Leuz, 2021; Larrinaga and Bebbington, 2021; de Villiers, La Torre and Molinari, 2022; Baumüller and Sopp, 2022; Stolowy and Paugam, 2023; Wagenhofer, 2024). Recent evidence also shows that materiality assessments remain heterogeneous in practice, reinforcing the need for transparent processes that connect

reported topics with strategy and decision-making (Padilla-Garrido et al., 2024).

IFRS S1 represents an important development in this landscape because its explicit objective is to provide information about sustainability-related risks and opportunities that is useful to users of general-purpose financial reports. The standard focuses particularly on risks and opportunities that could reasonably be expected to affect an entity's cash flows, access to finance, or cost of capital over the short, medium, or long term, and it organizes core disclosures around governance, strategy, risk management, and metrics and targets (IFRS Foundation, 2023). Evidence that financially material climate-risk disclosure can improve the precision of analysts' forecasts reinforces the importance of connecting sustainability disclosure with economically relevant information rather than expanding disclosure volume for its own sake (Ben-Amar, Herrera and Martinez, 2024). This architecture therefore has the potential to transform sustainability reporting from a peripheral corporate-reporting exercise into a source of strategic risk intelligence.

Indonesia has translated this development into its national standard-setting architecture. The Indonesian Institute of Accountants (Ikatan Akuntan Indonesia—IAI) has issued PSPK 1, *Persyaratan Umum Pengungkapan Informasi Keuangan terkait Keberlanjutan*, and PSPK 2 on climate-related disclosure. Both are effective from 1 January 2027, and IAI explicitly describes the sustainability disclosure standards as convergent with IFRS Sustainability Disclosure Standards (IAI, 2025). The transition therefore creates an opportunity that goes considerably beyond compliance. Organizations can use PSPK 1 implementation to reconsider how sustainability information is generated, governed, connected with enterprise risk management, translated into financial consequences, and incorporated into strategic resource allocation.

Nevertheless, disclosure does not automatically produce resilience. Recent empirical work continues to question whether sustainability reports consistently contain information that is both new and financially material for investors. Haley, Shaffer and Sloan (2026), for example, find limited evidence that the sampled US sustainability reports containing SASB metrics generated substantial new market-relevant information, underscoring the distinction between producing sustainability information and ensuring that such information is decision-useful. The implication for PSPK 1 implementation is important: disclosure quality should not be assessed only by completeness of reporting requirements, but also by whether the underlying information genuinely informs strategy, risk decisions, financial planning, and capital allocation.

1.3 Business Continuity, Integrated GRC and the Finance Function

A second architecture relevant to resilience is business continuity management. ISO 22301 provides requirements for a Business Continuity Management System (BCMS) intended to help organizations plan, establish, implement, operate, monitor, review, maintain, and continually improve their capacity to prepare for and recover from disruptive incidents. The currently published international standard remains ISO 22301:2019, supplemented by ISO 22301:2019/Amd 1:2024 on climate-action changes; a third edition is under development and is intended to replace the 2019 edition when finalized (ISO, 2019; ISO, 2024; ISO, 2026). Business continuity therefore provides the operational discipline required to convert risk knowledge into executable preparations, recovery priorities, resource requirements, testing, and learning.

A third architecture is integrated Governance, Risk and Compliance (GRC). Enterprise risk management scholarship has repeatedly emphasized that risk becomes strategically useful when it is treated as a portfolio of interdependent exposures rather than as isolated departmental problems (Anton and Afloarei Nucu, 2020; Malik, Zaman and Buckby, 2020). Research on integrated GRC further suggests that governance structures, risk ownership, internal control, compliance, and assurance become more valuable when coordinated rather than duplicated across organizational silos (Wibowo et al., 2022; Siahaan et al., 2023). Complementary evidence indicates that organizational resilience can be developed as a property of ERM when risk culture, leadership, and dynamic capabilities are incorporated into the risk architecture (Dahmen, 2023). More recent case evidence likewise shows that ERM can contribute to resilience when risk-governance frameworks, risk culture, risk artefacts, and risk awareness evolve alongside strategic transformation rather than remaining static compliance mechanisms (Monazzam and Crawford, 2024).

Finance can potentially connect these architectures. Contemporary management accounting research depicts finance professionals as increasingly involved in analytics, data governance, business partnering, strategic interpretation, and performance management rather than merely recording historical transactions (Bhimani, 2020; Möller, Schäffer and Verbeeten, 2020; Andreassen, 2020). Yet better analytics do not automatically create better decisions: information-system quality and data quality remain prerequisites for credible management accounting information (Knauer, Nikiforow and Wagener, 2020). Recent evidence from ASEAN developing economies also indicates that sustainable management accounting practices can contribute to sustainable risk management processes, strengthening the relevance of finance as a bridge between sustainability information and enterprise risk decisions (Abu Afifa, Nguyen and Bui, 2024).

1.4 Research Gap, Questions and Objectives

The principal gap addressed by this article is therefore not the absence of sustainability standards, risk-management frameworks, continuity standards, or financial-management tools. Rather, the gap lies in their **integration**. Sustainability-reporting research frequently concentrates on disclosure, materiality, standard setting, and investor information. Business-continuity research focuses on disruption preparedness and recovery. ERM and GRC research concentrates on risk ownership, governance, control, and assurance. Management-accounting research investigates data, control, performance, and strategic business partnering. These literatures intersect, but their relationships are seldom synthesized into a single finance-led resilience architecture.

Accordingly, this review addresses four research questions. Together, they connect uncertainty, disclosure, governance, continuity, and finance within a unified resilience perspective. RQ1 asks: How can strategic uncertainty and the organizational 'fog of war' be transformed into financially material and decision-useful risk intelligence through PSPK 1 and sustainability-related financial disclosure? RQ2 asks: How can PSPK 1, ISO 22301, and integrated GRC be connected to strengthen financial, operational, and organizational resilience?

RQ3 asks: What role should the finance function play in integrating risk intelligence, business continuity, governance, sustainability information, and capital allocation to support decision superiority? RQ4 asks: What organizational, informational, technological, governance, and assurance challenges constrain implementation of an integrated resilience architecture, particularly in organizations preparing for PSPK 1?

The article has six corresponding objectives. It conceptualizes strategic uncertainty as an organizational information and sensemaking problem; analyzes PSPK 1/IFRS S1 as an architecture for financially relevant sustainability information; examines ISO 22301 as a mechanism for converting risk awareness into continuity capability; analyzes integrated GRC as a governance and assurance architecture; repositions finance as the translator connecting risks with liquidity, capital allocation, and performance; and synthesizes these elements into a proposed Finance-Led Resilience Integration Loop (FLRIL).

2. LITERATURE REVIEW

2.1 Strategic Uncertainty, Sensemaking and the “Fog of War”

Risk management traditionally assumes that important exposures can be identified, measured, compared, and treated. This remains indispensable for credit risk, market risk, operational loss frequencies, project probabilities, and many other contexts. Yet strategic decisions increasingly involve uncertainty that cannot be reduced to reliable probability distributions. Packard and Clark (2020) differentiate

uncertainty according to its mitigability and show why predictive approaches may be inappropriate where additional information cannot sufficiently resolve uncertainty. Stanton and Roelich (2021) similarly demonstrate that decision-making under deep uncertainty often requires robustness, flexibility, scenario comparison, and adaptive pathways rather than optimization around a single expected future.

This distinction changes the meaning of risk intelligence. Under relatively stable conditions, risk information can be understood as data about identifiable events, likelihoods, and consequences. Under deep uncertainty, however, organizations require the ability to interpret weak signals, detect changes in assumptions, identify emerging interdependencies, and construct plausible narratives about how disruptions might propagate. Sensemaking is therefore not an optional communication activity; it is part of the risk-management mechanism itself. Kilskar, Danielsen and Johnsen (2020) highlight how sensemaking contributes to resilience in critical situations, while Nowling and Seeger (2020) show how sensemaking failure can contribute to crisis escalation.

Scenario planning is particularly relevant because it does not require managers to claim certainty about which future will occur. Instead, it allows them to examine the consequences of several internally coherent futures, identify common vulnerabilities, and preserve options. Bouhaleb and Smida (2020) find a relationship between scenario planning and strategic flexibility in European manufacturing firms, reinforcing the argument that scenario use is valuable not only for forecasting but for developing adaptive organizational capabilities.

The “fog of war” metaphor should therefore not be interpreted as an argument against measurement. It is an argument against the false precision that occurs when uncertain assumptions are transformed into point estimates without communicating their limitations. A resilient finance function should combine quantitative modeling with managerial judgment, sensitivity analysis, scenario analysis, ranges, triggers, and explicit assumptions. This allows uncertainty to remain visible while still making it actionable.

2.2 Organizational Resilience as a Dynamic Capability

Duchek’s (2020) capability-based conceptualization provides a useful foundation for integrating risk and resilience. Anticipation concerns observation, identification, and preparation before disruption. Coping concerns acceptance, response, and implementation during disruption. Adaptation concerns reflection, learning, and organizational change afterward. The value of this temporal perspective is that it prevents resilience from being reduced to emergency response. A firm may survive one crisis through extraordinary effort but remain structurally fragile if it fails to institutionalize lessons.

Hillmann and Guenther (2021) similarly identify conceptual plurality in the resilience literature and emphasize capabilities, processes, and outcomes. Hillmann (2021) further shows that organizational resilience draws from multiple disciplinary traditions, which explains why resilience is alternately associated with robustness, flexibility, recovery, adaptation, reliability, learning, and transformation. The present review treats these not as mutually exclusive definitions but as layers. Robustness helps an organization resist disturbance; continuity helps it maintain critical activities; recovery restores acceptable performance; adaptation modifies routines; and transformation changes the organizational configuration when the old one is no longer viable.

The COVID-19 literature illustrates these layers. Wulandhari et al. (2023) show how organizations responded to supply-chain risks during the pandemic, while Ding et al. (2021) demonstrate that stronger pre-crisis financial conditions—including liquidity-related characteristics—were associated with greater corporate market resilience. Albuquerque et al. (2020) and Broadstock et al. (2021) document evidence consistent with resilience advantages for firms with stronger environmental and social characteristics in particular market contexts, whereas Bae et al. (2021) provide more qualified evidence about whether corporate social responsibility itself protected shareholder value during the crisis. Such variation is useful: resilience cannot be inferred automatically from ESG scores, sustainability reports, or particular policies. It depends on how financial, operational, relational, and governance resources interact under actual disruption.

The distinction between resilience and continuity is equally important. Galaitsi et al. (2023) show that business continuity management, operational resilience, and organizational resilience share important features but should not be treated as synonyms. De Matteis, Elia and Del Vecchio (2023) find that business continuity management contributes to organizational resilience in SMEs but is embedded in broader capabilities. Steen, Haug and Patriarca (2024) similarly propose a conceptual connection between continuity and resilience management. Resilience is thus an umbrella organizational capacity within which continuity plays an essential but not exhaustive role.

2.3 PSPK 1, IFRS S1 and Sustainability-Related Financial Risk

Sustainability reporting has developed through heterogeneous institutional logics. The literature documents continuing tensions between accountability to broad stakeholder groups, impact reporting, investor-oriented enterprise-value information, and the desire for comparable global standards (Larrinaga and Bebbington, 2021; Christensen, Hail and Leuz, 2021; de Villiers, La Torre and Molinari, 2022). Abeysekera (2022) proposes a framework for sustainability reporting that illustrates its

multidimensional character, whereas Baumüller and Sopp (2022) examine the transition toward double materiality in European sustainability reporting.

Materiality is particularly important for this article because PSPK 1 is intended to support sustainability-related financial disclosure rather than create a detached catalogue of environmental and social impacts. The debate is consequential because implementation choices determine which risks receive management attention and which information enters strategic and financial decision processes. Abhayawansa (2022) critically examines the movement between single- and double-materiality concepts; Barker and Mayer (2025) argue that investor and nature perspectives create distinct materiality lenses; and Wagenhofer (2024) discusses sustainability reporting explicitly from a financial reporting perspective. Empirical research further shows considerable variation in how companies operationalize and disclose materiality assessments, which can weaken transparency and comparability when methods are insufficiently explained (Padilla-Garrido et al., 2024). Stolyow and Paugam (2023) consequently question the extent to which global convergence is achievable when reporting systems have distinct users, objectives, and conceptual assumptions.

IFRS S1 narrows this complexity by specifying an investor-oriented threshold: sustainability-related risks and opportunities are relevant when they could reasonably be expected to affect the entity's prospects through cash flows, access to finance, or cost of capital over time. Its core disclosure architecture covers governance, strategy, risk management, and metrics and targets, while PSPK 1 brings this international baseline into Indonesia's sustainability-disclosure architecture from 1 January 2027. Evidence from climate-risk disclosure research suggests that decision usefulness is strongest when disclosed risks are financially material, because material physical-risk disclosures have been associated with lower analyst forecast error and dispersion (Ben-Amar, Herrera and Martinez, 2024). Evidence from emerging markets also indicates that the relationship between governance, ESG performance, and financing costs is institutionally contingent, underscoring the importance of context when translating sustainability information into financial implications (Mohammad, Osman and Rani, 2023).

The strategic importance of this structure lies in **financial translation**. Consider a water-stress issue. A conventional sustainability report might disclose water consumption, local conditions, and reduction initiatives. A resilience-oriented PSPK 1 process should additionally ask: which plants are exposed; which suppliers depend on the same watershed; how would production capacity change under severe restriction; what revenue would be at risk; what capital expenditure would be required for alternative supply; how would

insurance respond; what covenants or liquidity constraints could emerge; and what strategic options remain? The sustainability indicator becomes strategic only after it is connected to operational dependence and financial consequences.

Xie et al. (2023) show the importance of financially material environmental information, while Kulik and Dobler (2023) demonstrate the contested nature of stakeholder participation in ISSB standard setting. Barker (2025) provides a contemporary conceptual discussion of corporate sustainability reporting and its relationship with financial reporting. Most importantly, Haley, Shaffer and Sloan (2026) provide evidence that the presence of sustainability reports does not guarantee substantial new financially material information for investors. This reinforces the argument that organizations should pursue **connected information**, rather than treating PSPK 1 as a documentation exercise.

The developing-country context adds further complexity. Suhardjo et al. (2026) demonstrate how materiality concepts are interpreted in a developing-country sustainability reporting setting, suggesting that institutional capacity, stakeholder expectations, and implementation routines influence how formal principles become actual disclosure practice. For Indonesian organizations, PSPK 1 implementation will therefore involve not merely learning new definitions but reshaping information systems, governance processes, risk taxonomies, managerial responsibilities, and assurance readiness.

2.4 ISO 22301 and the Operationalization of Resilience

Sustainability and risk disclosures explain what management knows, what matters, and how governance responds, but they do not by themselves ensure that critical activities continue after disruption. Business continuity management addresses this implementation gap. ISO 22301:2019 remains the current published international standard, supplemented by the 2024 climate-action amendment, while ISO/CD 22301 (Edition 3) is under development and is intended to replace the 2019 edition once the revision process is completed (ISO, 2019; ISO, 2024; ISO, 2026). This distinction is important for publication accuracy because organizations should base current implementation claims on the published standard rather than on a draft revision.

Business Impact Analysis (BIA) is particularly relevant for financial integration. Operational functions commonly identify critical processes, recovery requirements, dependencies, and maximum tolerable disruption. Finance can extend BIA by quantifying how disruption affects contribution margins, working capital, cash conversion, contractual obligations, liquidity, debt-service capacity, and capital needs. In this way, continuity analysis becomes a bridge between operational resilience and financial resilience. Research following COVID-19 provides strong evidence for this broader approach. Margherita and Heikkilä (2021)

document continuity actions undertaken by major companies during the pandemic, while Sánchez and De Batista (2023) show empirically that organizations remain vulnerable to a range of disruptions even when formal continuity methodologies are available. Craighead, Ketchen and Darby (2020) argue that pandemics require a richer theoretical toolbox for supply-chain management, while Ivanov (2020) demonstrates through simulation how epidemic disruptions propagate through supply chains. Ivanov and Dolgui (2020) extend resilience toward the concept of supply-network viability and survivability, emphasizing the ability of intertwined networks to continue satisfying societal and market needs under severe disruption.

Empirical and review research further indicates that continuity depends heavily on interorganizational structures. El Baz and Ruel (2021) find that supply-chain risk-management practices can mitigate disruption impacts on resilience and robustness. Chowdhury et al. (2021) synthesize pandemic-related supply-chain studies, whereas Queiroz et al. (2022) map a research agenda around epidemic impacts. Belhadi et al. (2021) derive resilience lessons from automobile and airline supply chains. Digitalization can also strengthen visibility and response capability: Spieske and Birkel (2021) examine Industry 4.0 and supply-chain resilience, Ivanov and Dolgui (2021) conceptualize digital supply-chain twins for disruption-risk management, and Ning et al. (2023) provide empirical evidence that digital technologies can improve resilience in manufacturing.

These studies demonstrate why ISO 22301 should be understood as more than emergency planning or certification. Continuity capability depends on critical process identification, dependency mapping, recovery strategies, redundancy, alternative suppliers, technology recovery, communication protocols, exercises, and the availability of financial resources to activate these arrangements. A beautifully documented continuity plan that cannot be funded during a crisis is not a resilient plan.

2.5 Integrated GRC as the Governance Architecture of Resilience

Enterprise risk management emerged partly because risk portfolios cannot be managed effectively when individual risks are optimized independently. Anton and Afloarei Nucu (2020) show that ERM research increasingly emphasizes integration, governance, strategic alignment, and organizational value, while Malik, Zaman and Buckby (2020) demonstrate the importance of risk committees in the relationship between ERM and firm performance. Dahmen (2023) further identifies organizational resilience as a key property that ERM can cultivate in response to novel and severe crisis events through risk culture, leadership, and dynamic capabilities. Recent case evidence from Monazzam and Crawford (2024) extends this argument by showing how risk governance, culture, artefacts, and awareness can build

resilience resources during sustainability-oriented strategic transformation.

Integrated GRC extends this logic. Governance determines who possesses decision rights and accountability. Risk management identifies uncertainty relative to objectives. Compliance provides mechanisms for maintaining actions within legal, regulatory, policy, and ethical boundaries. Internal control operationalizes responses. Assurance provides confidence that information and controls are working as intended. When these elements operate independently, organizations may maintain several risk registers describing the same exposure differently, duplicate controls, produce incompatible metrics, and leave gaps between operational ownership and board reporting.

Wibowo et al. (2022) provide an Indonesian perspective on integrated GRC and combined assurance, while Siahaan et al. (2023) examine the effectiveness of integrated GRC in relation to anti-corruption objectives. These studies reinforce the importance of institutional conditions, governance structures, and assurance arrangements. Integrated GRC should therefore not be mistaken for a software platform. Technology can support it, but integration is fundamentally about common definitions, governance relationships, decision rights, risk appetite, controls, escalation, and assurance.

This distinction is essential for PSPK 1. Sustainability teams may identify transition risk; risk functions may classify it as strategic or regulatory risk; operations may treat it as an asset-conversion problem; legal functions may frame it as compliance exposure; and finance may model it as a cash-flow or impairment issue. An integrated GRC architecture does not require all disciplines to adopt identical analytical methods. It requires them to share a coherent representation of the underlying exposure, ownership, time horizon, controls, and financial consequences.

2.6 Finance as the Engine of Decision Superiority

The finance function occupies a distinctive position because almost every strategically significant organizational risk eventually requires a resource decision. Finance allocates capital, manages liquidity, monitors performance, evaluates investments, supports forecasts, interfaces with lenders and investors, and provides information for executive decisions. Digitalization has further expanded this role by increasing expectations for analytics, scenario modeling, and business partnering (Bhimani, 2020; Möller, Schäffer and Verbeeten, 2020; Andreassen, 2020).

However, decision superiority should not be confused with decision speed alone. A rapid decision based on unreliable data can destroy value faster. Knauer, Nikiforow and Wagener (2020) demonstrate the importance of information-system quality for management accounting data quality. Finance-led resilience therefore depends on information traceability, common definitions, reconciliations between

financial and non-financial systems, credible assumptions, and documented models.

Management-control research has increasingly addressed resilience directly. Passetti et al. (2021) show how management-control practices played technical, moral, and facilitating roles during the COVID-19 crisis. Weber, Pedell and Rötzel (2024) synthesize the relationship between management-control systems and organizational resilience and demonstrate that controls can contribute both to stability and adaptation. The implication is that resilience-oriented finance requires a **balanced control philosophy**: sufficiently formal to protect accountability and data quality, yet sufficiently interactive to support learning and adaptation.

Financial resilience also depends on buffers and optionality. Ding et al. (2021) find that stronger pre-pandemic finances, including more cash and undrawn credit and lower debt exposure, were associated with milder stock-market losses during the pandemic. Finance can therefore contribute to resilience through liquidity reserves, committed credit lines, insurance, diversified funding, disciplined working-capital management, flexible cost structures, and contingency capital. Such buffers appear inefficient when evaluated only against stable-period return metrics, but their strategic value becomes visible when organizations model severe yet plausible disruption scenarios.

Finally, finance can mediate the relationship between sustainability ambition and executable strategy. Abu Afifa, Nguyen and Bui (2024) find that sustainable management accounting practices contribute to sustainable risk management across listed firms in developing ASEAN economies. This evidence aligns closely with the central proposition of the present review: sustainability information becomes resilience-producing information when finance helps convert it into risk-adjusted scenarios, resource requirements, capital decisions, and management-control processes.

2.7 Integrative Theoretical Perspective

Four theoretical lenses help integrate these literatures. First, **sensemaking** explains how organizations interpret incomplete and ambiguous signals before they become structured risks. Second, **organizational information processing** suggests that greater environmental uncertainty creates a need for stronger information-processing capacity, richer coordination, and cross-functional interpretation. Third, **dynamic capabilities and organizational resilience** explain how organizations sense changes, mobilize responses, and reconfigure resources. Fourth, a **decision-usefulness and governance perspective** explains why information must ultimately be connected with users, decision rights, accountability, and resource allocation.

Taken together, these perspectives support the central proposition of this article. The proposition treats resilience as an integration problem in which information, governance, operational capability, financial resources, assurance, and learning must reinforce one another rather than operate as separate control systems.

Strategic uncertainty does not produce resilience merely by generating more information. Organizational resilience emerges when relevant signals are interpreted, converted into financially meaningful risk intelligence, governed through integrated GRC, operationalized through continuity capabilities, funded through financial resource allocation, subjected to reliable controls and assurance, and continually revised through learning.

Figure 1 consolidates this theoretical proposition. Rather than placing PSPK 1, ISO 22301, GRC, and finance beside one another as independent initiatives, it represents them as sequentially and recursively connected components of an enterprise resilience architecture.

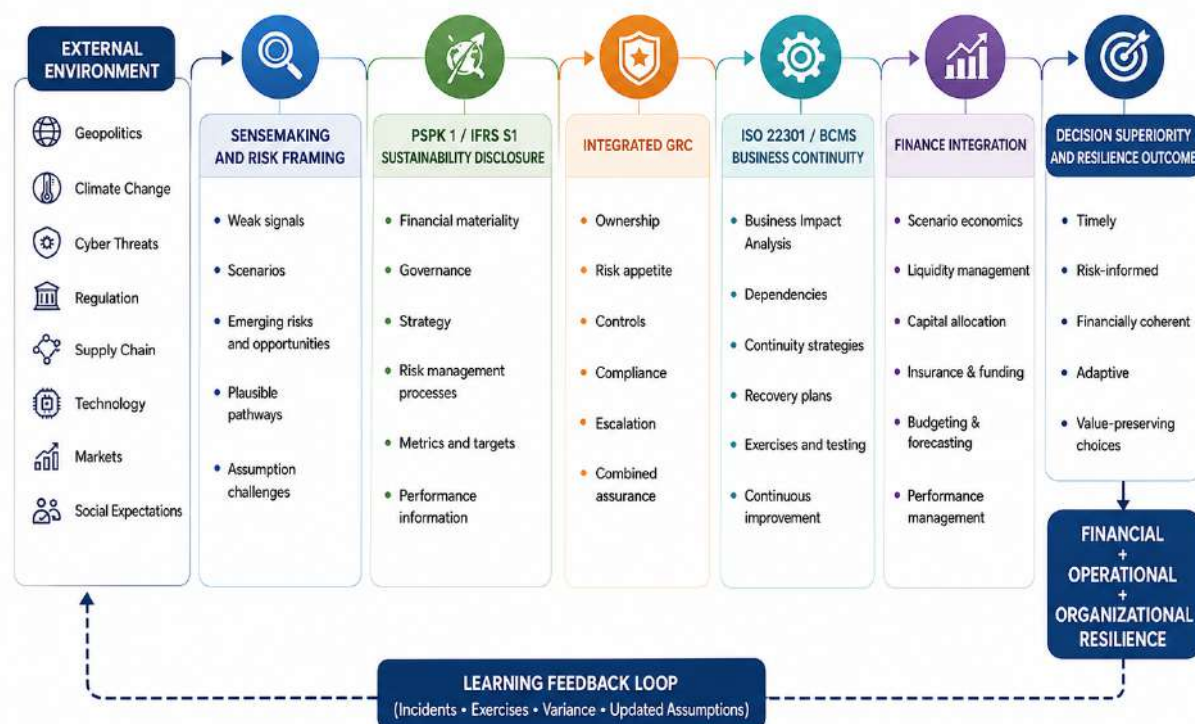


Figure 1. From Strategic Uncertainty to Decision Superiority

Source: Author synthesis based on Ducheck (2020), Galaitis et al. (2023), Monazzam and Crawford (2024), IFRS Foundation (2023), and ISO 22301.

Figure 1 demonstrates that the proposed architecture is neither strictly linear nor purely hierarchical. Risk information generated through PSPK 1 can change GRC priorities; continuity testing can reveal new financial exposures; financial stress testing can change risk appetite; and actual incidents can invalidate assumptions used in sustainability disclosures. Consequently, resilience depends on recursive learning. The ultimate output is not compliance with four independent frameworks, but a higher organizational capacity to make coherent decisions while conditions are changing.

3. METHOD

3.1 Review Design

This study employs a **qualitative, integrative literature review**. It is explicitly **not a Systematic Literature Review (SLR)** and does not claim exhaustive retrieval of all publications within a predefined universe. This distinction is methodologically important. Integrative reviews are particularly appropriate when a research problem crosses disciplinary boundaries and the objective is to build a higher-order conceptual synthesis rather than calculate pooled effects or provide a statistically exhaustive inventory of previous studies (Elsbach and van Knippenberg, 2020; Lubbe, ten Ham-Baloyi and Smit, 2020; Post et al., 2020).

The research question requires integration across several mature but only partially connected bodies of scholarship: strategic uncertainty and sensemaking; organizational

resilience; sustainability reporting and materiality; business continuity; enterprise risk management and integrated GRC; financial resilience; management accounting; and strategic decision-making. A narrowly systematic search centered on one vocabulary would risk excluding conceptually important contributions because these literatures use different terminology for related mechanisms.

3.2 Literature Identification and Selection

The review concentrated primarily on peer-reviewed journal articles published from 2020 through August 2026. Earlier sources were not used as part of the main journal evidence base, although established concepts are acknowledged where necessary through recent reviews. Literature was identified iteratively through combinations of terms such as “organizational resilience,” “business continuity management,” “ISO 22301,” “enterprise risk management,” “integrated GRC,” “sustainability reporting,” “financial materiality,” “IFRS S1,” “ISSB,” “management accounting,” “financial resilience,” “scenario planning,” “sensemaking,” and “decision making under uncertainty.”

Selection was purposive rather than mechanically exhaustive. Articles were retained where they contributed substantively to at least one of four analytical tasks: clarifying a concept, providing empirical evidence, identifying implementation mechanisms or limitations, or supporting cross-domain theoretical synthesis. Preference was given to reputable peer-reviewed journals and literature with direct relevance to the

proposed integration. The review also deliberately included studies reporting mixed or contrary findings—for example, differing evidence on whether stronger sustainability performance provided market resilience during COVID-19—because qualitative synthesis should illuminate boundary conditions rather than eliminate inconvenient evidence.

Authoritative institutional documents were treated separately from journal literature. PSPK 1 information was drawn from IAI; IFRS S1 requirements from the IFRS Foundation; and ISO 22301 status and requirements from ISO. These documents were used to establish normative and technical facts but were **not counted toward the journal-article evidence base**.

3.3 Analytical Procedure

Analysis proceeded through four iterative stages. First, sources were coded conceptually around uncertainty, sensing, materiality, governance, risk ownership, continuity, financial translation, resources, controls, assurance, learning, and resilience outcomes. Second, related concepts appearing under different disciplinary labels were compared. For example, “early warning” in risk management, “weak-signal interpretation” in sensemaking, “leading indicators” in management control, and sustainability “metrics and targets” were interpreted as related information-processing mechanisms.

Third, first-order concepts were consolidated into higher-order themes. Six themes became particularly prominent: (1) uncertainty requires sensemaking; (2) sustainability information requires financial translation; (3) continuity converts risk knowledge into executable capability; (4) integrated GRC establishes governance and assurance; (5) finance connects risk with economic decisions; and (6) resilience requires iterative learning and adaptation.

Fourth, the themes were synthesized into the Finance-Led Resilience Integration Loop developed later in the Discussion section. The framework is therefore not presented as an empirically validated causal model. It is an integrative conceptual proposition derived from recurrent relationships across the reviewed literatures and intended for subsequent empirical testing.

3.4 Review Rigor and Limitations

Rigor was pursued through conceptual triangulation rather than PRISMA-style comprehensiveness. Multiple theoretical traditions were compared; different evidence types were considered; contradictory findings were retained; and authoritative standards were distinguished from peer-reviewed research. The methodology therefore provides transparency without implying systematic-review procedures that were not used.

The approach nevertheless has limitations. Literature selection necessarily involves researcher judgment, and the interdisciplinary scope means that not every specialized

literature can be represented equally. PSPK 1 also has an unavoidable temporal limitation: because it becomes effective only on 1 January 2027, substantial post-implementation empirical evidence is not yet available. Consequently, PSPK-specific conclusions are prospective and draw partly on IFRS S1, sustainability reporting, ERM, and Indonesian institutional evidence. This limitation strengthens rather than weakens the case for future empirical research after implementation.

4. RESULTS

4.1 Theme One: Strategic Uncertainty Becomes Manageable through Sensemaking, Not through Data Accumulation Alone

The first thematic finding is that contemporary resilience problems frequently involve simultaneous information scarcity and information overload. Digital organizations can possess millions of observations while lacking a coherent interpretation of what is changing strategically. This problem becomes acute when data are distributed among sustainability, finance, operations, cybersecurity, procurement, risk, compliance, and external intelligence systems.

Sensemaking literature indicates that decision quality depends on organizational interpretation, not simply information volume (Kilskar, Danielsen and Johnsen, 2020; Nowling and Seeger, 2020; Stephens et al., 2020). Under uncertainty, leaders must ask what has changed, which assumptions may no longer hold, who is exposed, and which emerging signals warrant escalation. This interpretive process should precede formal quantification where quantification would otherwise create false confidence.

The literature on predictive versus non-predictive strategy also indicates that not every uncertainty should be forced into an expected-value framework (Packard and Clark, 2020). Some exposures are sufficiently measurable to support probability-based risk models. Others are better addressed through scenario ranges, strategic options, trigger points, robust minimum capabilities, and reversible decisions. Stanton and Roelich (2021) reinforce this logic in their review of decision methods under deep uncertainty.

For finance, this means upgrading risk information from a static risk register into a dynamic decision narrative. An effective narrative should identify the source of uncertainty, affected strategic objectives, causal pathways, assumptions, possible financial effects, operational dependencies, plausible scenarios, indicators, and decision thresholds. Such risk narratives do not replace quantitative modeling; they discipline it by making the logic behind numerical estimates visible.

4.2 Theme Two: PSPK 1 Can Turn Sustainability Issues into Strategic Risk Intelligence—But Only if Information Is Connected

The second theme is that PSPK 1 creates significant potential for connecting sustainability with strategy, but its value depends on implementation design. IFRS S1 requires information on governance, strategy, risk management processes, and metrics and targets, and it explicitly links relevant sustainability risks and opportunities to cash flows, access to finance, and cost of capital. PSPK 1 adopts this sustainability-related financial logic within the Indonesian framework from 2027. Recent evidence on climate-risk disclosure and materiality assessment further indicates that decision usefulness depends on the financial relevance, transparency, and disciplined identification of reported risks rather than disclosure volume alone (Ben-Amar, Herrera and Martinez, 2024; Padilla-Garrido et al., 2024).

The literature demonstrates why this connection is needed. Sustainability reporting has often developed as a specialized reporting function with separate data owners, materiality assessments, systems, and publication cycles (Christensen, Hail and Leuz, 2021; de Villiers, La Torre and Molinari, 2022). The result can be high-quality narrative disclosure that remains weakly connected to budgeting, capital allocation, procurement decisions, asset planning, or risk appetite. Materiality debates further complicate implementation because financially material information for investors and significant impacts on society or nature are conceptually

related but not identical (Abhayawansa, 2022; Baumüller and Sopp, 2022; Barker and Mayer, 2025; Wagenhofer, 2024).

A resilience-oriented implementation should therefore translate sustainability issues through explicit financial pathways. Transition risk, for example, may affect energy costs, asset lives, capital expenditure, customer demand, taxes, regulatory compliance, insurance, and financing. Physical climate risk may affect facilities, suppliers, inventory, production, transportation, insurance premiums, and working-capital cycles. Human-capital issues may affect productivity, absenteeism, recruitment costs, operational safety, and service continuity. The value of PSPK 1 lies partly in making these pathways visible and governable.

Yet financial materiality should not be assumed merely because information appears in a sustainability report. Haley, Shaffer and Sloan (2026) provide recent evidence that sampled sustainability reports did not consistently contain substantial new financially material information for investors. This is a valuable warning against **disclosure inflation**—the accumulation of more metrics without stronger decision relevance. Organizations should therefore ask not only “Can we disclose this?” but “Which decision changes if this information changes?”

Figure 2 presents the resulting cross-framework logic. It positions PSPK 1 as the information and financial-materiality layer, GRC as the governance layer, ISO 22301 as the continuity layer, and finance as the economic decision layer.

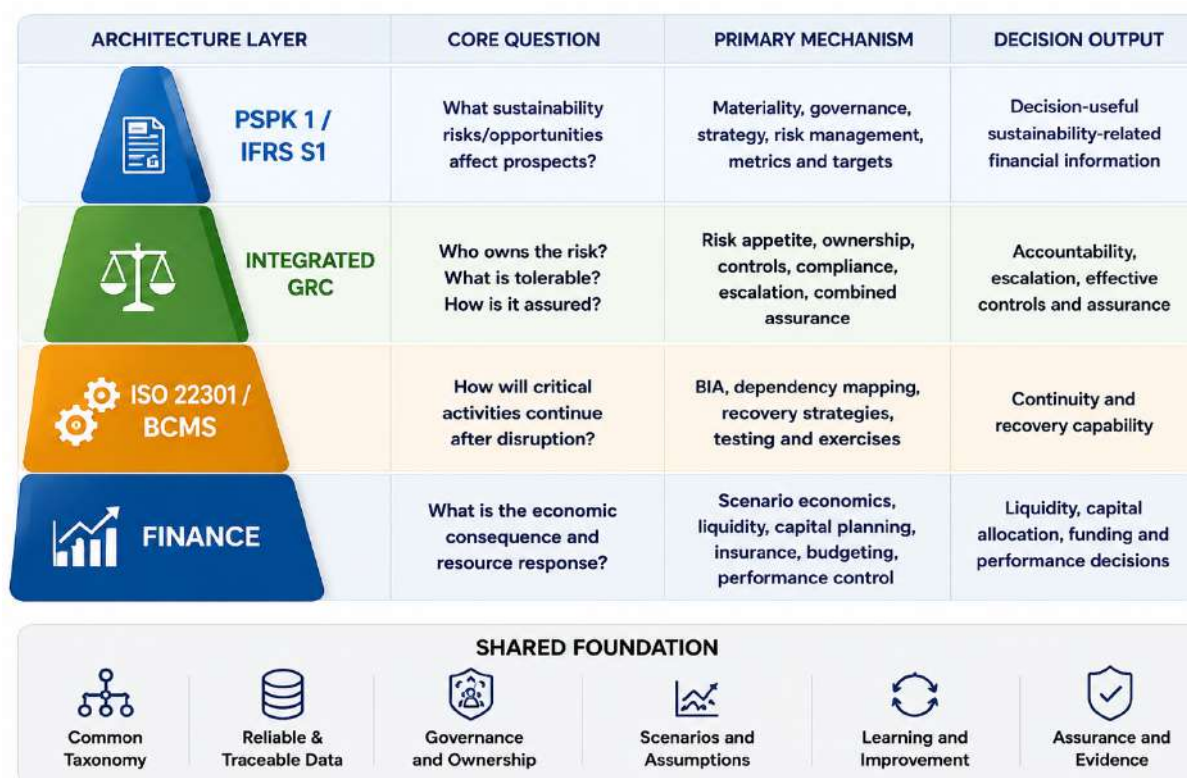


Figure 2. Cross-Framework Resilience Architecture
Source: Author synthesis.

The figure emphasizes complementarity. PSPK 1 does not replace ERM; ERM does not replace continuity management; ISO 22301 does not determine capital allocation; and finance does not replace governance or operational expertise. Resilience emerges when their outputs become interoperable. For example, a climate-related risk disclosed under PSPK 1 should be traceable to an enterprise risk owner, continuity assumptions, financial scenarios, controls, and funding decisions.

4.3 Theme Three: Business Continuity Converts Risk Awareness into Executable Capability

The third theme is that risk awareness produces limited value unless organizations can act when disruption materializes. Business continuity contributes this execution layer. COVID-19 research illustrates that firms needed much more than risk registers: they required alternative working arrangements, supplier substitutions, technology capacity, health protocols, cash preservation, operational prioritization, and rapid communication (Margherita and Heikkilä, 2021).

Supply-chain studies reinforce the same point. Ivanov (2020) demonstrates that disruption effects can propagate temporally through interconnected networks. Ivanov and Dolgui (2020) argue that organizations should think beyond resilience toward the viability of intertwined supply networks. Craighead, Ketchen and Darby (2020), Chowdhury et al. (2021), Queiroz et al. (2022), and Belhadi et al. (2021) collectively demonstrate that severe disruptions expose dependencies that normal efficiency metrics may understate. From a finance perspective, continuity planning should therefore identify not only **recovery time** but also **financial endurance time**. A business may technically be able to restore production within two weeks, yet liquidity may be exhausted sooner if receivables stop, customers require refunds, emergency purchases require cash, or lenders impose additional conditions. Conversely, a financially strong organization may remain unable to operate if a unique technological or supplier dependency cannot be restored.

The BIA can therefore be expanded into a **Financially Integrated Business Impact Analysis**. For each critical process, organizations can map revenue contribution, variable and fixed costs, cash-flow timing, inventory effects, receivables, contractual penalties, regulatory consequences, insurance coverage, replacement costs, supplier payments, and minimum liquidity needs. This creates a quantitative bridge between ISO 22301 and finance.

Digital technologies can enhance this capability but do not eliminate governance requirements. Spieske and Birkel (2021), Ivanov and Dolgui (2021), and Ning et al. (2023) show how digital visibility, simulation, and digital-twin concepts can support disruption management. Yet models remain vulnerable to poor data, hidden dependencies, and inappropriate assumptions. Digital resilience therefore requires both technical capability and management judgment.

4.4 Theme Four: Integrated GRC Is the Governance Infrastructure of Enterprise Resilience

The fourth finding is that resilience requires explicit governance. Weak signals must have owners; scenarios must have decision rights; controls must have accountable operators; tolerance limits must be defined; and information must reach governance bodies at the appropriate time. ERM provides a mechanism for connecting risks to objectives, but integrated GRC extends the mechanism into compliance, control, and assurance.

A common risk taxonomy is foundational. Without it, sustainability teams may describe “water scarcity,” operations may record “production interruption,” procurement may report “supplier failure,” and finance may model “revenue downside” without recognizing that they represent connected manifestations of the same underlying exposure. Integrated taxonomy does not mean eliminating specialized terminology; it means creating mapping relationships that enable aggregation and escalation.

Risk appetite is equally important. Resilience cannot mean eliminating every risk because risk-taking is necessary for strategy. Management must distinguish risks that can be tolerated, mitigated, transferred, avoided, or consciously accepted. Malik, Zaman and Buckby (2020) show the relevance of formal risk-governance structures, while Monazzam and Crawford (2024) demonstrate that risk governance evolves as strategic transformation unfolds.

Combined assurance completes the governance cycle. Information used in PSPK 1 disclosure may originate in systems that historically were not subject to the same control discipline as financial reporting, so integrated assurance should consider data lineage, methodology, estimates, access controls, management review, internal audit, compliance monitoring, and external assurance where relevant. Wibowo et al. (2022) show the importance of integrated GRC and combined assurance within an Indonesian institutional setting, while recent international evidence indicates that assurance-provider choices, assurance scope, and assurance quality can affect the credibility and correction of sustainability information (Bentley-Goode et al., 2025; Krasodomska et al., 2025). A recent synthesis of sustainability-assurance research likewise identifies provider expertise, governance characteristics, stakeholder engagement, and materiality assessment as important quality indicators, reinforcing the need to design assurance as part of the information architecture rather than as a year-end verification exercise (Xu, Hay and Harrison, 2026).

The implication is that PSPK 1 readiness and resilience readiness share infrastructure. Both require reliable data, documented ownership, effective controls, governance oversight, and evidence, while assurance quality depends on how these mechanisms operate across the reporting process (Bentley-Goode et al., 2025; Xu, Hay and Harrison, 2026).

An organization that develops these capabilities only during annual reporting will struggle to use the information for timely decisions. The stronger model is to generate controlled sustainability-risk information as part of routine management processes and use formal reporting as one output of that system.

4.5 Theme Five: Finance Translates Multi-Dimensional Risk into Comparable Strategic Choices

The fifth theme is the most central to the proposed framework. Risk disciplines frequently use different units: emissions, downtime, cyber incidents, employee turnover, supplier concentration, compliance breaches, biodiversity exposure, temperature scenarios, or recovery times. Senior management cannot allocate scarce resources effectively unless at least some of these heterogeneous exposures can be translated into economically comparable decision consequences.

Finance provides this translation. A CFO function can model revenue-at-risk, margin-at-risk, cash-flow-at-risk, liquidity requirements, capital expenditure, replacement cost, impairment sensitivity, financing implications, and expected or scenario-based loss. This does not imply monetizing everything. Ethical obligations, legal requirements, safety limits, and certain environmental thresholds should not be reduced simply to net present value. Rather, financial translation complements non-financial constraints by showing resource consequences and affordability.

Scenario economics are especially important. Instead of a single forecast, finance can compare baseline, adverse, severe-but-plausible, and transformative scenarios. Each scenario can incorporate assumptions about revenue, input prices, supplier availability, downtime, insurance recoveries, regulatory costs, financing, and capital requirements. Scenario comparison helps identify **no-regret investments** that remain beneficial across multiple futures, such as diversified critical suppliers, secure data backups, improved energy efficiency, or additional liquidity capacity.

Evidence from corporate crises supports the importance of financial buffers. Ding et al. (2021) show that firms with stronger financial positions were more resilient during COVID-19. Albuquerque et al. (2020), Broadstock et al. (2021), and Cheema-Fox et al. (2021) provide complementary evidence connecting organizational characteristics with market resilience. These studies do not prove that larger cash balances always maximize value; rather, they show that financial flexibility has option value during systemic stress.

Management control then converts strategy into monitoring. Weber, Pedell and Rötzel (2024) show that management-control systems can contribute to resilience by balancing stability and flexibility. Passetti et al. (2021) similarly demonstrate that controls can facilitate organizational responses during crisis. Finance can therefore embed resilience within rolling forecasts, capital-allocation gates,

performance dashboards, contingency budgets, and management reviews instead of treating it as an annual risk exercise.

4.6 Theme Six: Implementation Is Constrained by Integration Problems More than by Framework Availability

The sixth theme concerns implementation complexity. The first challenge is data fragmentation: financial, operational, sustainability, compliance, supplier, and risk data are frequently stored in different platforms with inconsistent ownership and periodicity. Knauer, Nikiforow and Wagener (2020) show that system quality and data quality are important determinants of management accounting information quality, while recent sustainability-assurance research emphasizes the importance of reliable processes, provider expertise, and evidence for credible reporting (Krasodomska et al., 2025; Xu, Hay and Harrison, 2026). Poor integration may therefore cause sophisticated analytics to amplify weak data rather than improve decisions.

The second challenge is **taxonomy inconsistency**. Risk classifications designed for insurance, operational incident reporting, sustainability reporting, or financial planning may not align. Without mapping, aggregation becomes unreliable and the board may receive several apparently independent risks whose combined exposure is materially larger.

The third challenge is **quantification under long horizons**. Sustainability-related risks can develop over decades while budgets operate annually and strategic plans often cover three to five years. Discounting may mechanically reduce the present value of long-term impacts, even where they threaten asset viability. Organizations need scenario horizons aligned with the risk rather than forcing all exposures into the annual budgeting cycle.

Fourth is **assurance maturity**. Financial-reporting systems have decades of internal-control development, whereas sustainability information can still depend on spreadsheets, manual surveys, third parties, or estimations. PSPK 1 implementation can expose weaknesses in data lineage, methodologies, documentation, and governance.

Fifth is **functional fragmentation**. CFOs, CROs, sustainability officers, internal auditors, legal teams, CIOs, procurement leaders, and BCM managers may possess different incentives and professional vocabularies. Integrated resilience requires boundary-spanning roles rather than dominance by one function. Finance should be an integrator, not an organizational monopolist.

Sixth is **compliance substitution**. Organizations may perceive success as publishing a compliant PSPK 1 report, obtaining ISO certification, operating an ERM process, or purchasing GRC software. Each achievement can be valuable, but none guarantees resilience. Compliance substitution occurs when evidence of a framework is mistaken for evidence of organizational capability.

Finally, there is **resource asymmetry**. Large corporations can invest in scenario platforms, sustainability specialists, assurance systems, cyber redundancy, and dedicated BCM teams. SMEs may lack such capacity even while facing severe concentration risks. De Matteis, Elia and Del Vecchio (2023) underscore the distinctive resilience constraints of SMEs. Implementation guidance should therefore be proportional, prioritizing critical dependencies and high-consequence exposures rather than indiscriminately copying large-company architectures.

5. DISCUSSION AND ANALYSIS

5.1 Answering RQ1: From the “Fog of War” to Financially Material Risk Intelligence

The first research question asked how strategic uncertainty can be converted into decision-useful risk intelligence. The synthesis suggests a five-step transformation.

First, organizations sense changes through external intelligence, operational data, stakeholder information, sustainability indicators, incident records, and managerial judgment. Second, they frame the signals by identifying plausible causal pathways and affected objectives. Third, they test materiality, including whether sustainability-related risks could affect cash flows, financing, or cost of capital. Fourth, they translate material exposures into scenarios, operational consequences, and financial ranges. Fifth, they define decision triggers determining when management action becomes necessary.

PSPK 1 can significantly strengthen this transformation because its architecture encourages connection between governance, strategy, risk management processes, and performance. However, its value is maximized when materiality assessment is connected to internal decision processes rather than performed solely for external disclosure. The review therefore rejects the proposition that “more sustainability reporting” automatically means “better strategic information.” Haley, Shaffer and Sloan (2026) provide an important empirical reminder that financial materiality must be demonstrated rather than presumed.

Decision-useful risk intelligence consequently possesses at least six attributes: **relevance, traceability, financial connectivity, scenario awareness, ownership, and timeliness**. Information can be accurate but irrelevant; relevant but unauditable; material but too late; financially significant but unowned. Resilience requires these attributes simultaneously.

5.2 Answering RQ2: PSPK 1, ISO 22301 and GRC Are Complementary, Not Competing, Frameworks

The second research question concerned integration. The reviewed evidence indicates that the three frameworks address different parts of the resilience problem.

PSPK 1 primarily addresses the information problem: which sustainability-related risks and opportunities affect prospects,

how are they governed, how does strategy respond, and what performance information is relevant? This information layer makes risk visibility more decision-useful when materiality assessments are transparent and connected to financial consequences (Padilla-Garrido et al., 2024; Ben-Amar, Herrera and Martinez, 2024).

Integrated GRC addresses the governance problem: who owns the risk, what exposure is acceptable, which controls operate, when does escalation occur, and how is reliability assured? This governance layer is strengthened when ERM includes risk culture, leadership, and resilience capabilities rather than operating as a static compliance process (Dahmen, 2023; Monazzam and Crawford, 2024).

ISO 22301 addresses the continuity problem: which activities are critical, what dependencies exist, how long can disruption be tolerated, how will continuity be maintained, and how will recovery capability be tested? This operational layer converts risk knowledge into executable preparation, while empirical continuity research shows that vulnerability persists unless plans are embedded in broader adaptive practices (Sánchez and De Batista, 2023; Galaitis et al., 2023).

Finance addresses the resource and economic decision problem: what are the financial consequences, how much liquidity and capital are required, which alternatives create the strongest risk-adjusted value, and how will performance be monitored? This economic layer translates heterogeneous exposures into comparable resource choices while recognizing that the link between sustainability information and financing outcomes can vary across sectors and institutional settings (Mohammad, Osman and Rani, 2023).

An organization becomes more resilient when these questions share data, taxonomy, scenarios, governance, and learning. For example, a sustainability-related supply risk identified through PSPK 1 should be represented in ERM; assigned an accountable owner through GRC; tested through supplier-continuity scenarios; reflected in BIA; translated into inventory and liquidity requirements; evaluated in capital allocation; and monitored through indicators. This is qualitatively different from four departments independently documenting the same issue.

5.3 Answering RQ3: Finance as a Resilience Integrator

The third research question addresses the role of finance. The evidence supports five finance functions.

First is **translation**. Finance connects non-financial risk metrics with financial consequences without assuming that monetary measures are the only relevant measures. Second is **comparison**. Finance allows heterogeneous strategic options to be compared through scenarios, cash flows, capital requirements, and risk-adjusted outcomes. Third is **buffer management**. Finance determines appropriate liquidity, funding, insurance, and contingency capacity. Fourth is **control**. Finance embeds resilience indicators within planning, budgeting, forecasting, investment approval, and

performance management. Fifth is **communication**. Finance connects operational and sustainability information with executive management, boards, lenders, and investors. This role leads to the concept of **decision superiority**. In this article, decision superiority does not mean perfect prediction or consistently outperforming competitors. It refers to the organizational capacity to make decisions that are **more timely, better informed, more financially coherent, more**

risk-aware, and more adaptable than would be possible under fragmented information and governance.

Figure 3 synthesizes the mechanism into the proposed Finance-Led Resilience Integration Loop. The circular structure emphasizes that disclosure, assurance, continuity testing, financial allocation, and learning continuously feed information back into the next cycle of sensing and prioritization.

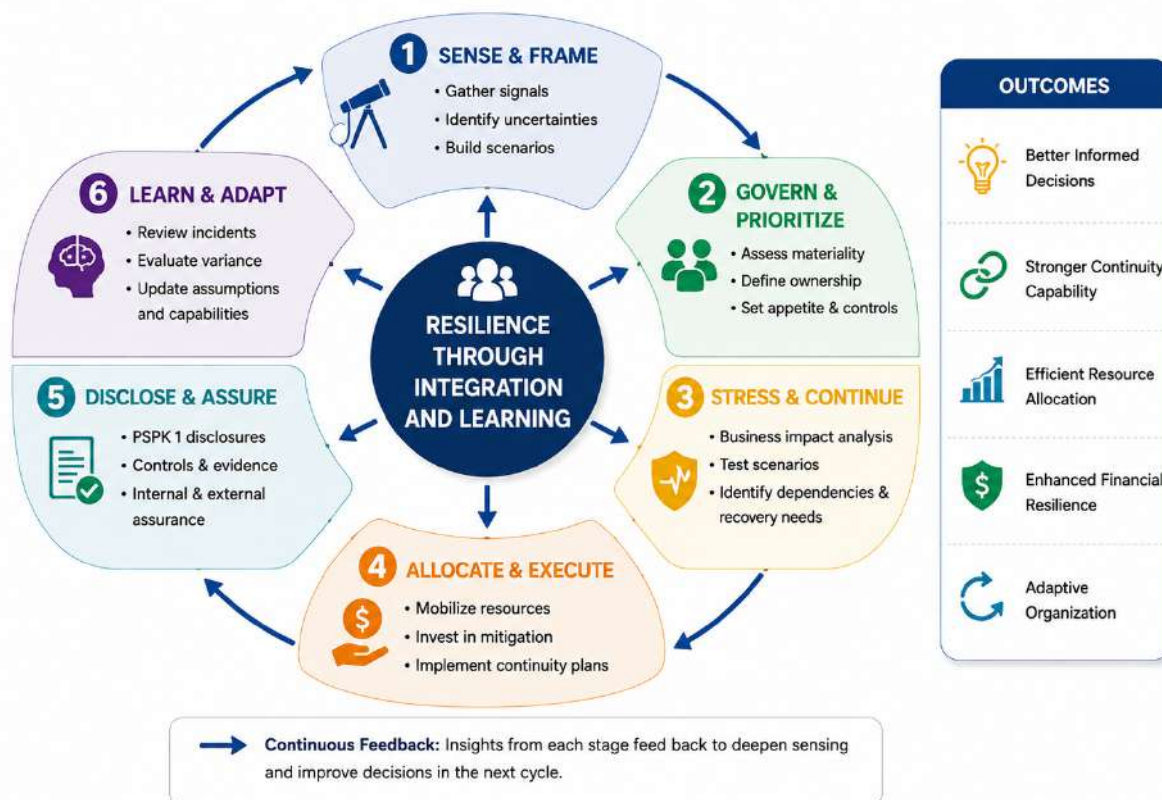


Figure 3. Finance-Led Resilience Integration Loop (FLRIL)

Source: Author synthesis.

The loop differs from conventional compliance models because disclosure is not the endpoint. Disclosure and assurance produce evidence about the quality of the underlying information architecture; exercises reveal whether continuity assumptions are credible; actual incidents reveal model errors; and variance analysis reveals whether financial assumptions were realistic. These insights return to the sensing stage. The loop therefore treats resilience as a continuously updated organizational capability.

5.4 Answering RQ4: Challenges to Integrated Implementation

The fourth research question concerns implementation constraints. The review identifies five clusters.

The first is **technical integration**: inconsistent systems, definitions, data ownership, and time horizons. The second is **cognitive integration**: different professional functions interpret the same uncertainty differently. The third is **governance integration**: accountability can be ambiguous

when risks span several functions. The fourth is **economic integration**: organizations may identify important risks without determining appropriate resource responses. The fifth is **assurance integration**: information may become externally reportable before controls are sufficiently mature. These constraints explain why buying an integrated GRC platform or sustainability reporting system cannot by itself create resilience. Technology supports integration after the organization has clarified taxonomy, governance, data ownership, risk appetite, decision rights, and process interfaces. Otherwise, digitalization reproduces fragmentation electronically.

5.5 A Four-Stage Resilience Integration Maturity Model Implementation is unlikely to occur in one transformation. The literature suggests a maturity progression from fragmented compliance toward adaptive integration. Figure 4 translates this progression into four organizational stages.

“Finance as a Resilience Integrator: Linking PSPK 1, ISO 22301 and Integrated GRC from Strategic Uncertainty to Decision Superiority—A Review”

Before applying the model, management should recognize that maturity is multidimensional. A company may possess sophisticated financial modeling but weak sustainability data, excellent continuity arrangements but fragmented GRC, or

advanced external reporting but little integration with capital allocation. The maturity level should therefore describe the weakest strategically important interfaces rather than the most advanced individual function.

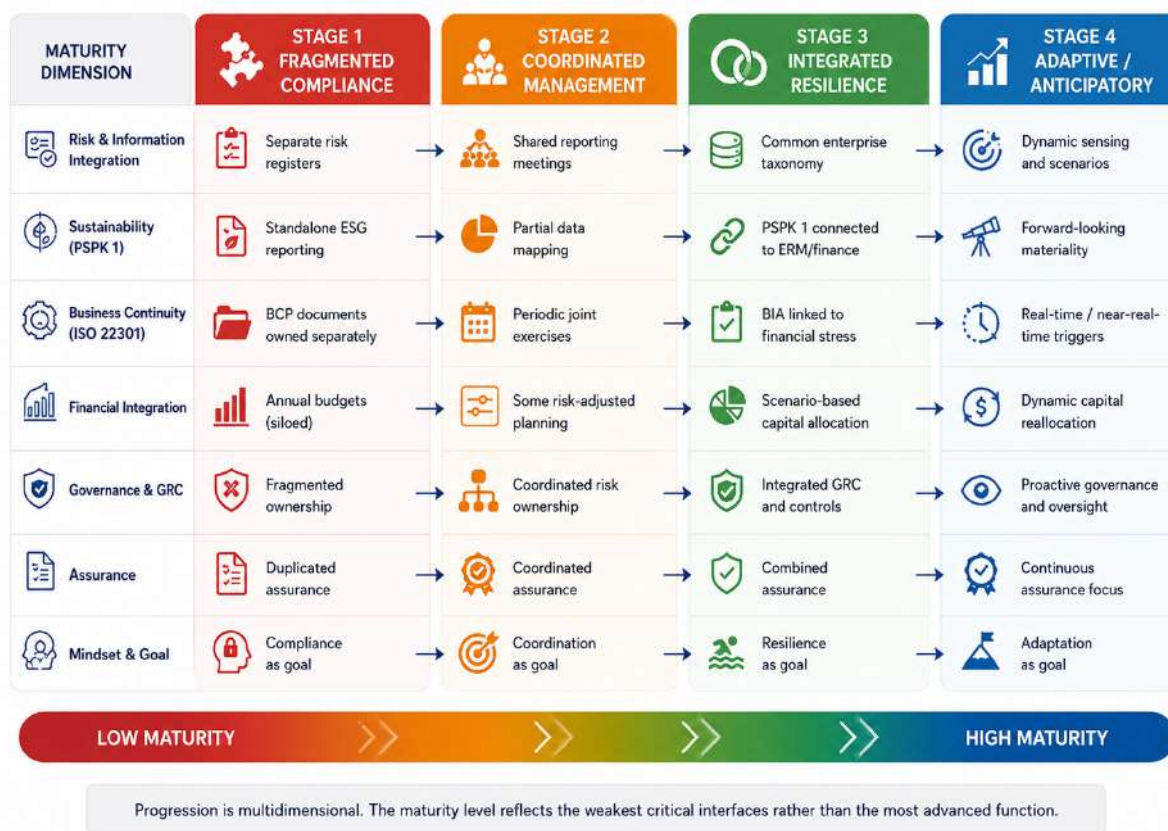


Figure 4. Organizational Resilience Integration Maturity Model
Source: Author synthesis.

At Stage 1, organizations can formally comply with several frameworks yet remain fragile because systems and responsibilities are separated. Stage 2 introduces coordination, cross-functional committees, and limited information sharing. Stage 3 integrates taxonomy, materiality, BIA, finance, controls, and assurance. Stage 4 adds dynamic sensing, adaptive scenarios, rapid capital reallocation, and continuous learning. The objective is not technological sophistication for its own sake but organizational responsiveness with maintained governance discipline.

5.6 Recommended Implementation Roadmap

A practical transition toward Stage 3 or Stage 4 can begin with ten mutually reinforcing actions. These actions are presented as an implementation sequence, but organizations may iterate among them as data maturity, governance capability, and risk priorities evolve.

First, the board should establish an **enterprise resilience mandate** clarifying that sustainability disclosure, risk management, continuity, and finance are connected responsibilities. Governance committees should understand

which topics are delegated and which require board-level escalation.

Second, management should develop a **common enterprise risk ontology**. This does not require replacing every specialized risk classification, but the organization should be able to map sustainability risks, operational dependencies, financial exposures, compliance obligations, and strategic objectives.

Third, organizations preparing for PSPK 1 should conduct a **financial-connectivity test** for each material sustainability risk. The test asks which cash-flow lines, assets, liabilities, financing arrangements, strategic initiatives, and operational processes could be affected.

Fourth, BIA should be linked to **financial stress testing**. Critical-process recovery assumptions should be translated into revenue, margin, liquidity, working-capital, and funding requirements. Finance and BCM teams should jointly challenge the assumptions.

Fifth, organizations should establish **joint scenario governance**. Sustainability, risk, strategy, operations, and finance functions should not independently develop

incompatible scenarios. A core scenario library can provide shared assumptions while allowing specialized analyses.

Sixth, resilience investments should enter the normal **capital-allocation process**. Redundancy, cyber recovery, alternative suppliers, energy transition, data infrastructure, insurance, and liquidity capacity should compete transparently for resources using both financial and strategic criteria.

Seventh, the organization should strengthen **sustainability-information controls** before PSPK 1 becomes merely a year-end reporting exercise. Data owners, calculation methodologies, evidence retention, review procedures, access controls, and change management should be documented.

Eighth, internal audit, risk, compliance, sustainability assurance, and external assurance should develop a combined-assurance map. The objective is to identify critical risks with excessive assurance duplication and those with insufficient independent challenge, while recognizing that provider type, assurance scope, and engagement quality can influence the credibility and correction of sustainability reporting (Bentley-Goode et al., 2025; Krasodomska et al., 2025; Xu, Hay and Harrison, 2026).

Ninth, organizations should conduct **integrated resilience simulations** involving CFO, CRO, operations, technology, sustainability, legal, communications, and executive leadership. Exercises should incorporate both operational events and financial consequences rather than ending when technical recovery is achieved.

Tenth, every major incident and exercise should generate a **formal learning loop**. Assumptions, risk assessments, recovery strategies, financial scenarios, controls, and disclosure judgments should be updated. Organizational resilience improves when lessons change routines rather than remaining in post-event reports.

5.7 Theoretical Implications

This synthesis contributes theoretically in four ways. First, it conceptualizes organizational resilience as partly an **information-processing capability**. Organizations with superior sensing, interpretation, and scenario processes can act earlier without requiring perfect prediction.

Second, it identifies resilience as a **governance capability**. Information has limited value if ownership, escalation, risk appetite, and decision rights are ambiguous. Integrated GRC therefore provides more than compliance efficiency; it creates the governance infrastructure through which risk information can affect action.

Third, the review conceptualizes resilience as a **financial capability**. Liquidity, contingent financing, capital allocation, insurance, and performance-control systems determine whether strategic and operational responses can actually be implemented. The evidence on financial flexibility during COVID-19 supports this interpretation (Ding et al., 2021).

Fourth, the article positions finance as a **boundary-spanning integrator** rather than the sole owner of resilience. The CFO

function can connect risk with economic decisions precisely because it interacts with strategy, operations, investors, lenders, accounting systems, and capital allocation. Yet effective integration depends on collaboration with sustainability, risk, BCM, technology, compliance, and operational expertise.

5.8 Implications for PSPK 1 Implementation in Indonesia

For Indonesian organizations, the period before PSPK 1 becomes effective on 1 January 2027 creates a valuable implementation window. Organizations should resist treating this period only as a reporting-gap assessment. A stronger approach is to conduct a **resilience-gap assessment**: Which PSPK 1 disclosure requirements expose weaknesses in governance? Which sustainability risks are absent from ERM? Which material risks lack continuity scenarios? Which BIA assumptions lack financial translation? Which sustainability metrics lack reliable controls? Which resilience investments are absent from capital planning?

This approach is especially important because developing-country implementation can be constrained by uneven data maturity, supply-chain informality, resource limitations, regulatory learning, and shortages of specialized expertise. Suhardjo et al. (2026) demonstrate that materiality practices in developing-country contexts are shaped by institutional and organizational conditions. Indonesia should therefore pursue proportional but substantive implementation rather than mimicking the reporting architecture of large multinational corporations without considering local operational realities.

For regulators and professional bodies, interoperability should be encouraged. PSPK 1 implementation guidance can emphasize connections with existing enterprise risk-management, accounting, internal-control, and governance systems rather than encouraging separate sustainability bureaucracies. Training should extend beyond disclosure technicians to CFOs, CROs, internal auditors, board members, operational leaders, and assurance providers.

Finally, PSPK 1 implementation offers an important research opportunity. Post-2027 studies can examine whether organizations that integrate PSPK 1 with ERM, BCMS, and financial planning achieve better disclosure quality, stronger resilience, lower disruption losses, superior liquidity management, more credible assurance, or improved access to capital. The FLRIL proposed in this article provides a testable starting framework for such research.

6. CONCLUSION

Organizations confronting contemporary uncertainty do not lack frameworks. They possess sustainability standards, enterprise risk-management systems, business-continuity standards, internal-control architectures, compliance processes, management accounting systems, and increasingly

sophisticated digital tools. Their greater problem is that these mechanisms often operate independently.

This qualitative literature review argues that resilience is strengthened when those mechanisms are integrated around a common decision architecture. Strategic uncertainty first requires sensemaking and scenario framing. PSPK 1 can then help convert relevant sustainability risks and opportunities into financially connected strategic information. Integrated GRC establishes ownership, appetite, controls, compliance, escalation, and assurance. ISO 22301 converts risk awareness into continuity and recovery capability. Finance translates the combined information into liquidity requirements, capital allocation, funding, performance management, and strategic choice.

The resulting Finance-Led Resilience Integration Loop consists of six recurring stages: Sense and Frame; Govern and Prioritize; Stress and Continue; Allocate and Execute; Disclose and Assure; and Learn and Adapt. Its most important characteristic is recursion. Disclosure is not the endpoint, continuity plans are not static, financial models are not permanent, and risk assessments are not final. Incidents, exercises, changes in sustainability conditions, market movements, and assurance findings continually update the next round of strategic sensing.

The substantive implication is that organizations preparing for PSPK 1 should seek resilience readiness rather than disclosure readiness alone. A technically compliant report produced by disconnected functions may improve external disclosure but leave the enterprise vulnerable. Conversely, an integrated system can make sustainability information valuable throughout the year by connecting it to business continuity, risk governance, liquidity, capital, and strategic decisions.

Decision superiority in this context does not mean eliminating uncertainty. Uncertainty cannot be eliminated. It means creating an organization that can recognize important change earlier, understand its economic significance more coherently, preserve critical operations under stress, allocate scarce resources more intelligently, and revise decisions faster when assumptions become invalid. Finance becomes the engine of resilience not because every problem is financial, but because meaningful organizational responses ultimately require disciplined choices about scarce resources. For practitioners, the priority is therefore to connect taxonomy, data, governance, BIA, scenarios, capital planning, and assurance. For regulators and professional bodies, the priority is interoperability and capability building. For researchers, the forthcoming implementation of PSPK 1 creates a rare opportunity to observe whether sustainability-related financial disclosure can evolve from a reporting requirement into an organizational capability for resilience. Future empirical work should test the FLRIL across industries, firm sizes, and institutional settings, including

whether higher integration maturity is associated with faster recovery, stronger liquidity, higher-quality disclosure, superior risk-adjusted investment, and more adaptive organizational performance.

REFERENCES

1. Abeysekera, I. (2022) ‘A framework for sustainability reporting’, *Sustainability Accounting, Management and Policy Journal*, 13(6), pp. 1386–1409. <https://doi.org/10.1108/SAMPJ-08-2021-0316>.
2. Abhayawansa, S. (2022) ‘Swimming against the tide: back to single materiality for sustainability reporting’, *Sustainability Accounting, Management and Policy Journal*, 13(6), pp. 1361–1385. <https://doi.org/10.1108/SAMPJ-07-2022-0378>.
3. Abu Afifa, M., Nguyen, N.M. and Bui, D.V. (2024) ‘Management accounting practices going sustainable: the move toward sustainable risk management in ASEAN developing economies’, *Competitiveness Review*, 35(5), pp. 858–882. <https://doi.org/10.1108/CR-03-2024-0056>.
4. Albuquerque, R., Koskinen, Y., Yang, S. and Zhang, C. (2020) ‘Resiliency of environmental and social stocks: an analysis of the exogenous COVID-19 market crash’, *Review of Corporate Finance Studies*, 9(3), pp. 593–621. <https://doi.org/10.1093/rcfs/cfaa011>.
5. Andreassen, R.I. (2020) ‘Digital technology and changing roles: a management accountant’s dream or nightmare?’, *Journal of Management Control*, 31, pp. 209–238. <https://doi.org/10.1007/s00187-020-00303-2>.
6. Anton, S.G. and Afloarei Nucu, A.E. (2020) ‘Enterprise risk management: a literature review and agenda for future research’, *Journal of Risk and Financial Management*, 13(11), 281. <https://doi.org/10.3390/jrfm13110281>.
7. Bae, K.H., El Ghouli, S., Gong, Z. and Guedhami, O. (2021) ‘Does CSR matter in times of crisis? Evidence from the COVID-19 pandemic’, *Journal of Corporate Finance*, 67, 101876. <https://doi.org/10.1016/j.jcorpfin.2020.101876>.
8. Barker, R. (2025) ‘Corporate sustainability reporting’, *Journal of Accounting and Public Policy*, 49, 107280. <https://doi.org/10.1016/j.jaccpubpol.2024.107280>.
9. Barker, R. and Mayer, C. (2025) ‘Seeing double corporate reporting through the materiality lenses of both investors and nature’, *Accounting Forum*, 49(2), pp. 259–289. <https://doi.org/10.1080/01559982.2023.2277982>.

10. Baumüller, J. and Sopp, K. (2022) ‘Double materiality and the shift from non-financial to European sustainability reporting: review, outlook and implications’, *Journal of Applied Accounting Research*, 23(1), pp. 8–28. <https://doi.org/10.1108/JAAR-04-2021-0114>.
11. Belhadi, A., Kamble, S., Jabbour, C.J.C., Gunasekaran, A., Ndubisi, N.O. and Venkatesh, M. (2021) ‘Manufacturing and service supply chain resilience to the COVID-19 outbreak: lessons learned from the automobile and airline industries’, *Technological Forecasting and Social Change*, 163, 120447. <https://doi.org/10.1016/j.techfore.2020.120447>.
12. Ben-Amar, W., Herrera, D.C. and Martinez, I. (2024) ‘Do climate risk disclosures matter to financial analysts?’, *Journal of Business Finance & Accounting*, 51(7–8), pp. 2153–2180. <https://doi.org/10.1111/jbfa.12778>.
13. Bentley-Goode, K.A., Simnett, R., Thompson, A. and Trotman, A.J. (2025) ‘Choice of assurance provider and impact on quality of sustainability reporting: Evidence from sustainability reporting restatements’, *Accounting & Finance*, 65, pp. 2135–2172. <https://doi.org/10.1111/acfi.13367>.
14. Bhimani, A. (2020) ‘Digital data and management accounting: why we need to rethink research methods’, *Journal of Management Control*, 31, pp. 9–23. <https://doi.org/10.1007/s00187-020-00295-z>.
15. Bouhalleb, A. and Smida, A. (2020) ‘Exploring the relationship between scenario planning and strategic flexibility and complexity’, *European Journal of International Management*, 14(3), pp. 476–493. <https://doi.org/10.1504/EJIM.2020.107033>.
16. Broadstock, D.C., Chan, K., Cheng, L.T.W. and Wang, X. (2021) ‘The role of ESG performance during times of financial crisis: evidence from COVID-19 in China’, *Finance Research Letters*, 38, 101716. <https://doi.org/10.1016/j.frl.2020.101716>.
17. Cheema-Fox, A., LaPerla, B.R., Wang, H. and Serafeim, G. (2021) ‘Corporate resilience and response to COVID-19’, *Journal of Applied Corporate Finance*, 33(2), pp. 24–40. <https://doi.org/10.1111/jacf.12457>.
18. Chowdhury, P., Paul, S.K., Kaiser, S. and Moktadir, M.A. (2021) ‘COVID-19 pandemic related supply chain studies: a systematic review’, *Transportation Research Part E: Logistics and Transportation Review*, 148, 102271. <https://doi.org/10.1016/j.tre.2021.102271>.
19. Christensen, H.B., Hail, L. and Leuz, C. (2021) ‘Mandatory CSR and sustainability reporting: economic analysis and literature review’, *Review of Accounting Studies*, 26, pp. 1176–1248. <https://doi.org/10.1007/s11142-021-09609-5>.
20. Craighead, C.W., Ketchen, D.J. Jr and Darby, J.L. (2020) ‘Pandemics and supply chain management research: toward a theoretical toolbox’, *Decision Sciences*, 51(4), pp. 838–866. <https://doi.org/10.1111/deci.12468>.
21. Dahmen, P. (2023) ‘Organizational resilience as a key property of enterprise risk management in response to novel and severe crisis events’, *Risk Management and Insurance Review*, 26(2), pp. 203–245. <https://doi.org/10.1111/rmir.12245>.
22. De Matteis, J., Elia, G. and Del Vecchio, P. (2023) ‘Business continuity management and organizational resilience: a small and medium enterprises (SMEs) perspective’, *Journal of Contingencies and Crisis Management*, 31, pp. 670–682. <https://doi.org/10.1111/1468-5973.12470>.
23. de Villiers, C., La Torre, M. and Molinari, M. (2022) ‘The Global Reporting Initiative’s (GRI) past, present and future: critical reflections and a research agenda on sustainability reporting (standard-setting)’, *Pacific Accounting Review*, 34(5), pp. 728–747. <https://doi.org/10.1108/PAR-02-2022-0034>.
24. Ding, W., Levine, R., Lin, C. and Xie, W. (2021) ‘Corporate immunity to the COVID-19 pandemic’, *Journal of Financial Economics*, 141(2), pp. 802–830. <https://doi.org/10.1016/j.jfineco.2021.03.005>.
25. Duchek, S. (2020) ‘Organizational resilience: a capability-based conceptualization’, *Business Research*, 13, pp. 215–246. <https://doi.org/10.1007/s40685-019-0085-7>.
26. El Baz, J. and Ruel, S. (2021) ‘Can supply chain risk management practices mitigate the disruption impacts on supply chains’ resilience and robustness? Evidence from an empirical survey in a COVID-19 outbreak era’, *International Journal of Production Economics*, 233, 107972. <https://doi.org/10.1016/j.ijpe.2020.107972>.
27. Elsbach, K.D. and van Knippenberg, D. (2020) ‘Creating high-impact literature reviews: an argument for “integrative reviews”’, *Journal of Management Studies*, 57(6), pp. 1277–1289. <https://doi.org/10.1111/joms.12581>.
28. Galaitsi, S.E., Pinigina, E., Keisler, J.M., Pescaroli, G., Keenan, J.M. and Linkov, I. (2023) ‘Business continuity management, operational resilience, and organizational resilience: commonalities, distinctions, and synthesis’, *International Journal of*

- Disaster Risk Science*, 14, pp. 713–721. <https://doi.org/10.1007/s13753-023-00494-x>.
29. Gillan, S.L., Koch, A. and Starks, L.T. (2021) ‘Firms and social responsibility: a review of ESG and CSR research in corporate finance’, *Journal of Corporate Finance*, 66, 101889. <https://doi.org/10.1016/j.jcorpfin.2021.101889>.
 30. Haley, S., Shaffer, M. and Sloan, R. (2026) ‘Do sustainability reports contain financially material information?’, *Review of Accounting Studies*, 31, pp. 1–36. <https://doi.org/10.1007/s11142-025-09912-5>.
 31. Hillmann, J. (2021) ‘Disciplines of organizational resilience: contributions, critiques, and future research avenues’, *Review of Managerial Science*, 15, pp. 879–936. <https://doi.org/10.1007/s11846-020-00384-2>.
 32. Hillmann, J. and Guenther, E. (2021) ‘Organizational resilience: a valuable construct for management research?’, *International Journal of Management Reviews*, 23(1), pp. 7–44. <https://doi.org/10.1111/ijmr.12239>.
 33. Ivanov, D. (2020) ‘Predicting the impacts of epidemic outbreaks on global supply chains: a simulation-based analysis on the coronavirus outbreak case’, *Transportation Research Part E: Logistics and Transportation Review*, 136, 101922. <https://doi.org/10.1016/j.tre.2020.101922>.
 34. Ivanov, D. and Dolgui, A. (2020) ‘Viability of intertwined supply networks: extending the supply chain resilience angles towards survivability’, *International Journal of Production Research*, 58(10), pp. 2904–2915. <https://doi.org/10.1080/00207543.2020.1750727>.
 35. Ivanov, D. and Dolgui, A. (2021) ‘A digital supply chain twin for managing the disruption risks and resilience in the era of Industry 4.0’, *Production Planning & Control*, 32(9), pp. 775–788. <https://doi.org/10.1080/09537287.2020.1768450>.
 36. Kilskar, S.S., Danielsen, B.E. and Johnsen, S.O. (2020) ‘Sensemaking in critical situations and in relation to resilience—a review’, *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering*, 6(1). <https://doi.org/10.1115/1.4044789>.
 37. Knauer, T., Nikiforow, N. and Wagener, S. (2020) ‘Determinants of information system quality and data quality in management accounting’, *Journal of Management Control*, 31, pp. 97–121. <https://doi.org/10.1007/s00187-020-00296-y>.
 38. Krasodomska, J., Zarzycka, E., Street, D.L. and Grabowski, W. (2025) ‘The impact of companies’ trust-building efforts on sustainability reporting assurance quality: insights from Europe’, *Meditari Accountancy Research*, 33(7), pp. 246–279. <https://doi.org/10.1108/MEDAR-05-2024-2496>.
 39. Kulik, A. and Dobler, M. (2023) ‘Stakeholder participation in the ISSB’s standard-setting process: the consultations on the first exposure drafts on sustainability reporting’, *Sustainability Accounting, Management and Policy Journal*, 14(7), pp. 349–380. <https://doi.org/10.1108/SAMPJ-05-2023-0314>.
 40. Larrinaga, C. and Bebbington, J. (2021) ‘The pre-history of sustainability reporting: a constructivist reading’, *Accounting, Auditing & Accountability Journal*, 34(9), pp. 162–181. <https://doi.org/10.1108/AAAJ-03-2017-2872>.
 41. Lubbe, W., ten Ham-Baloyi, W. and Smit, K. (2020) ‘The integrative literature review as a research method: a demonstration review of research on neurodevelopmental supportive care in preterm infants’, *Journal of Neonatal Nursing*, 26(6), pp. 308–315. <https://doi.org/10.1016/j.jnn.2020.04.006>.
 42. Malik, M.F., Zaman, M. and Buckby, S. (2020) ‘Enterprise risk management and firm performance: role of the risk committee’, *Journal of Contemporary Accounting & Economics*, 16(1), 100178. <https://doi.org/10.1016/j.jcae.2019.100178>.
 43. Margherita, A. and Heikkilä, M. (2021) ‘Business continuity in the COVID-19 emergency: a framework of actions undertaken by world-leading companies’, *Business Horizons*, 64(5), pp. 683–695. <https://doi.org/10.1016/j.bushor.2021.02.020>.
 44. Mohammad, W.M.W., Osman, M. and Rani, M.S.A. (2023) ‘Corporate governance and environmental, social, and governance (ESG) disclosure and its effect on the cost of capital in emerging market’, *Asian Journal of Business Ethics*, 12, pp. 175–191. <https://doi.org/10.1007/s13520-023-00169-2>.
 45. Möller, K., Schäffer, U. and Verbeeten, F. (2020) ‘Digitalization in management accounting and control: an editorial’, *Journal of Management Control*, 31, pp. 1–8. <https://doi.org/10.1007/s00187-020-00300-5>.
 46. Monazzam, A. and Crawford, J. (2024) ‘The role of enterprise risk management in enabling organisational resilience: a case study of the Swedish mining industry’, *Journal of Management Control*, 35, pp. 59–108. <https://doi.org/10.1007/s00187-024-00370-9>.
 47. Ning, Y., Li, L., Xu, S.X. and Yang, S. (2023) ‘How do digital technologies improve supply chain resilience in the COVID-19 pandemic? Evidence from Chinese manufacturing firms’, *Frontiers of*

- Engineering Management*, 10(1), pp. 39–50. <https://doi.org/10.1007/s42524-022-0230-4>.
48. Nowling, W.D. and Seeger, M.W. (2020) ‘Sensemaking and crisis revisited: the failure of sensemaking during the Flint water crisis’, *Journal of Applied Communication Research*, 48(2), pp. 270–289. <https://doi.org/10.1080/00909882.2020.1734224>.
49. Packard, M.D. and Clark, B.B. (2020) ‘On the mitigability of uncertainty and the choice between predictive and nonpredictive strategy’, *Academy of Management Review*, 45(4), pp. 766–786. <https://doi.org/10.5465/amr.2018.0198>.
50. Padilla-Garrido, N., Aguado-Correa, F., Rabadán-Martín, I., López-Jiménez, J.M., de la Vega-Jiménez, J.J. and Peletier-Ribera, I. (2024) ‘Materiality analysis in sustainability reporting: Insights from large Spanish companies’, *Corporate Social Responsibility and Environmental Management*, 31(6), pp. 5391–5412. <https://doi.org/10.1002/csr.2866>.
51. Passetti, E., Battaglia, M., Bianchi, L. and Annesi, N. (2021) ‘Coping with the COVID-19 pandemic: the technical, moral and facilitating role of management control’, *Accounting, Auditing & Accountability Journal*, 34(6), pp. 1430–1444. <https://doi.org/10.1108/AAAJ-08-2020-4839>.
52. Post, C., Sarala, R., Gatrell, C. and Prescott, J.E. (2020) ‘Advancing theory with review articles’, *Journal of Management Studies*, 57(2), pp. 351–376. <https://doi.org/10.1111/joms.12549>.
53. Queiroz, M.M., Ivanov, D., Dolgui, A. and Fosso Wamba, S. (2022) ‘Impacts of epidemic outbreaks on supply chains: mapping a research agenda amid the COVID-19 pandemic through a structured literature review’, *Annals of Operations Research*, 319, pp. 1159–1196. <https://doi.org/10.1007/s10479-020-03685-7>.
54. Sánchez, M.A. and De Batista, M. (2023) ‘Business continuity for times of vulnerability: Empirical evidence’, *Journal of Contingencies and Crisis Management*, 31(3), pp. 431–440. <https://doi.org/10.1111/1468-5973.12449>.
55. Siahaan, M., Suharman, H., Fitrijanti, T. and Umar, H. (2023) ‘Will the integrated GRC implementation be effective against corruption?’, *Journal of Financial Crime*, 30(1), pp. 24–34. <https://doi.org/10.1108/JFC-12-2021-0275>.
56. Spieske, A. and Birkel, H. (2021) ‘Improving supply chain resilience through Industry 4.0: a systematic literature review under the impressions of the COVID-19 pandemic’, *Computers & Industrial Engineering*, 158, 107452. <https://doi.org/10.1016/j.cie.2021.107452>.
57. Stanton, M.C.B. and Roelich, K. (2021) ‘Decision making under deep uncertainties: a review of the applicability of methods in practice’, *Technological Forecasting and Social Change*, 171, 120939. <https://doi.org/10.1016/j.techfore.2021.120939>.
58. Steen, R., Haug, O.J. and Patriarca, R. (2024) ‘Business continuity and resilience management: a conceptual framework’, *Journal of Contingencies and Crisis Management*, 32(1), e12501. <https://doi.org/10.1111/1468-5973.12501>.
59. Stephens, K.K., Jahn, J.L.S., Fox, S., Charoensap-Kelly, P., Mitra, R., Sutton, J., Waters, E.D., Xie, B. and Meisenbach, R.J. (2020) ‘Collective sensemaking around COVID-19: experiences, concerns, and agendas for our rapidly changing organizational lives’, *Management Communication Quarterly*, 34(3). <https://doi.org/10.1177/0893318920934890>.
60. Stolowy, H. and Paugam, L. (2023) ‘Sustainability reporting: is convergence possible?’, *Accounting in Europe*, 20(2), pp. 139–165. <https://doi.org/10.1080/17449480.2023.2189016>.
61. Suhardjo, I., Akroyd, C., Rudyanto, A. and Suparman, M. (2026) ‘Double materiality and sustainability reporting: a qualitative study in a developing country’, *Meditari Accountancy Research*, 34(1), pp. 90–114. <https://doi.org/10.1108/MEDAR-11-2024-2738>.
62. Wagenhofer, A. (2024) ‘Sustainability reporting: a financial reporting perspective’, *Accounting in Europe*, 21(1), pp. 1–13. <https://doi.org/10.1080/17449480.2023.2218398>.
63. Weber, M.M., Pedell, B. and Rötzel, P.G. (2024) ‘Resilience-oriented management control systems: a systematic review of the relationships between organizational resilience and management control systems’, *Journal of Management Control*, 35, pp. 563–620. <https://doi.org/10.1007/s00187-024-00385-2>.
64. Wibowo, S., Achsani, N.A., Suroso, A.I. and Sasongko, H. (2022) ‘Integrated Governance, Risk, and Compliance (GRC) and combined assurance: a comparative institutional study’, *Indonesian Journal of Business and Entrepreneurship*, 8(2), p. 289. <https://doi.org/10.17358/ijbe.8.2.289>.
65. Wulandhari, N.B.I., Budhwar, P., Mishra, N., Akbar, S., Do, Q. and Milligan, G. (2023) ‘Organizational resilience to supply chain risks during the COVID-19 pandemic’, *British Journal of Management*, 34, pp. 1282–1315. <https://doi.org/10.1111/1467-8551.12648>.

66. Xie, J., Tanaka, Y., Keeley, A.R., Fujii, H. and Managi, S. (2023) ‘Do investors incorporate financial materiality? Remapping the environmental information in corporate sustainability reporting’, *Corporate Social Responsibility and Environmental Management*, 30(6), pp. 2924–2952. <https://doi.org/10.1002/csr.2524>.
67. Xu, H., Hay, D. and Harrison, J. (2026) ‘Sustainability assurance quality: Indicators and consequences’, *Accounting & Finance*, 66(1), pp. 849–886. <https://doi.org/10.1111/acfi.70196>.
68. Normative and Institutional Sources
69. IFRS Foundation (2023) *IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information*. International Sustainability Standards Board. Available at: <https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/ifrs-s1-general-requirements/> (Accessed: 27 August 2026).
70. Ikatan Akuntan Indonesia (IAI) (2025) *Standar Pengungkapan Keberlanjutan Efektif Per 1 Januari 2027*. 26 June. Available at: https://web.iaiglobal.or.id/Berita-IAI/detail/standar_pengungkapan_keberlanjutan_efektif_per_1_januari_2027 (Accessed: 27 August 2026).
71. International Organization for Standardization (ISO) (2019) *ISO 22301:2019 Security and resilience - Business continuity management systems - Requirements*. Available at: <https://www.iso.org/standard/75106.html> (Accessed: 27 August 2026).
72. International Organization for Standardization (ISO) (2024) *ISO 22301:2019/Amd 1:2024 Security and resilience - Business continuity management systems - Requirements - Amendment 1: Climate action changes*. Available at: <https://www.iso.org/standard/88412.html> (Accessed: 27 August 2026).
73. International Organization for Standardization (ISO) (2026) *ISO/CD 22301 Security and resilience - Business continuity management systems - Requirements (Edition 3, under development)*. Available at: <https://www.iso.org/standard/93606.html> (Accessed: 27 August 2026).