

**The Impact of Accounting Information Quality and
Environmental Uncertainty on the Strategic Orientation–
Performance Relationship: A Contingency-Based Analysis in
Syrian Listed Banks**

تأثير جودة المعلومات المحاسبية وعدم التأكد البيئي على العلاقة بين التوجه الاستراتيجي والأداء: تحليل

قائم على النظرية الشرطية في البنوك السورية المدرجة

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Abstract

This study investigates the influence of accounting information quality, measured through the flexibility of the accounting information system (AIS), and environmental uncertainty (EU) on the relationship between strategic orientation (SO) and strategic performance (SP) in Syrian listed conventional banks. Drawing on contingency theory, the study argues that organizational effectiveness is shaped by the degree of alignment between SO, the adaptive capacity of AIS, and prevailing levels of EU. Composite indices were developed for both SO and SP, and annual panel data from 11 banks covering the period 2016 to 2024 were utilized. Results show that SO, AIS flexibility, and EU each positively influence SP, while their three-way interaction strengthens the impact of proactive strategies under high uncertainty. These findings suggest that strategy emerges not in isolation but at the intersection of knowledge, flexibility, and turbulence, where uncertainty becomes a driver of performance rather than an obstacle.

Key words: Strategic Orientation, Accounting Information Quality, AIS Flexibility, Environmental Uncertainty, Strategic Performance, Composite Indicators, Contingency Theory.

1. INTRODUCTION

Organizations, including financial institutions, operate in environments characterized by rapid change, increasing complexity, and growing information demands. In such contexts, strategic decisions emerge from the interaction of multiple forces that are difficult to disentangle from their surrounding conditions. Strategies are shaped not only by internal considerations but also by overlapping regulatory, economic, and technological pressures that influence an organization's ability to adapt and sustain performance (Burrell & Morgan, 1979; Aldrich, 1972). From this perspective, adopting a particular strategic orientation (SO) is only a starting point; the more critical challenge lies in translating strategic intent into effective and consistent execution. Prior research suggests that an organization's ability to implement strategy depends largely on its internal capabilities, including information accounting systems, organizational routines, and accumulated knowledge, which enable timely and coordinated responses (Barney, 1991; Teece et al., 1997; Chenhall, 2003; Hall, 2011). However, much of the existing literature continues to treat the relationship between SO and performance in a relatively simplified manner, often overlooking the complex ways in which these capabilities interact with strategy in practice.

This study builds on contingency theory, which posits that the effectiveness of any SO cannot be evaluated in isolation but depends on its alignment with both internal and external contextual factors (Otley, 1980; Donaldson, 2001; Chenhall, 2003). Empirical evidence indicates that organizations with defensive orientations tend to rely on narrower-scope accounting information systems (AISs), whereas those with exploratory orientations require broader and more flexible systems to support innovation and responsiveness (Chenhall & Langfield-Smith, 1998; Jermias & Gani, 2005). While these findings are well established, they raise an important question as to whether such alignment alone is sufficient to explain performance differences across organizations. Within this framework, accounting information quality (AIQ) emerges as a factor that may play a more nuanced role than is often assumed. High-quality information not only supports more informed decision-making but also reduces ambiguity, enhances control, and improves resource allocation. In contrast, poor-quality information may distort these processes and weaken the alignment between

strategy and execution. Although International Financial Reporting Standards aim to enhance reliability and comparability, they do not eliminate managerial discretion, particularly in areas such as accruals and loan loss provisions (Dechow et al., 2010). This discretion can serve as a double-edged sword: it may improve reporting quality when exercised judiciously (Barth et al., 2008), but it can also be exploited through earnings management practices that undermine the credibility of financial reports (Ewert & Wagenhofer, 2005; Callao & Jarne, 2010). In addition to internal informational structures, environmental uncertainty (EU) represents a critical contextual factor in shaping strategic effectiveness. Environments characterized by ambiguity, volatility, and limited predictability impose greater informational demands on organizations and increase reliance on estimation and flexibility in financial measurement (Milliken, 1987; Duncan, 1972). The literature suggests that such conditions not only influence the type of information required but may also reshape the relationship between strategy and information systems themselves (Gordon & Narayanan, 1984; Gul & Chia, 1994).

These issues are particularly salient in financial institutions, where decisions related to risk management, credit evaluation, and operational planning depend directly on the quality of financial information. Moreover, the inherently judgment-based nature of many accounting figures amplifies the impact of information quality on the effectiveness of strategic execution. Accordingly, understanding how SO interacts with AIQ and EU is essential for explaining performance variation across organizations, and for clarifying why some firms successfully translate strategic intentions into tangible outcomes while others struggle to do so.

The relevance of this perspective is especially pronounced in the Syrian banking sector, which operates under conditions of elevated economic and financial risk, ongoing monetary policy fluctuations, and complex regulatory challenges. The heavy reliance on accounting estimates—particularly loan loss provisions—further underscores the importance of AIQ and EU in shaping performance outcomes. In such settings, accounting flexibility may function as an adaptive mechanism to cope with instability, thereby adding another layer of complexity to the strategy–performance relationship.

Despite a substantial body of research on SO, AIQ, and EU, prior studies

have largely examined these constructs in isolation. As a result, limited insight exists into how they jointly influence organizational performance, particularly in emerging and high-risk contexts. Moreover, empirical evidence on their potential three-way interaction remains scarce in the banking sector. Against this backdrop, this study adopts a contingency-based approach to examine how AIQ and EU shape the relationship between SO and organizational performance in Syrian listed banks. Specifically, it develops and tests an integrated model in which AIQ and EU act as contingent factors that condition the effectiveness of SO. In doing so, the study advances the view that strategic performance (SP) is not determined by strategic choice alone, but by the degree of alignment between strategy, information quality, and environmental conditions.

2. RESEARCH PROBLEM

Despite the extensive literature examining the individual relationships between SO and AIQ (Wu et al., 2015; Purba et al., 2021; Tian, 2024), EU and AIQ (Ghosh & Olsen, 2009; Dawood, 2023), as well as the links between strategy and AIS (Dawood, 2022; Abernethy & Guthrie, 1994) and strategy and performance (James & Hatten, 1994; Hatten et al., 2004) and although these relationships have been explored across various sectors such as manufacturing and services, prior studies have largely examined each relationship in isolation. As a result, the existing literature does not offer an integrated explanatory framework that captures how these variables interact—whether directly, through two-way interactions, or through higher-order (three-way) interactions—to shape SP in the banking sector. This gap becomes particularly critical in high-risk environments such as Syria, where banking institutions rely heavily on high-quality accounting information to support risk management and guide both operational and strategic decision-making. Grounded in Contingency Theory, this study seeks to address this gap by posing the following research questions:

1. To what extent does SO affect SP in Syrian listed banks?
2. What is the impact of AIQ on SP?
3. How does EU influence SP?
4. Does AIQ moderate the relationship between SO and SP?
5. Does EU moderate the relationship between SO and SP?
6. Does EU moderate the relationship between AIQ and SP?
7. How does the three-way interaction among SO, AIQ, and EU affect SP?

3. RESEARCH OBJECTIVES

This study aims to:

1. Examine the effect of SO on SP in Syrian listed banks.
2. Assess the impact of AIQ on SP.
3. Analyze the effect of EU on SP.
4. Test the moderating role of AIQ in the SO–SP relationship.
5. Examine the moderating role of EU in the SO–SP relationship.
6. Investigate the moderating effect of EU on the AIQ–SP relationship.
7. Analyze the three-way interaction among SO, AIQ, and EU in shaping SP.

4. SIGNIFICANCE OF THE STUDY

4.1. Scientific Significance

This study offers a theoretical contribution by developing a contingency-based framework that integrates strategic orientation, accounting information quality, and environmental uncertainty within a unified analytical model. Unlike much of the existing literature, which tends to examine these variables independently or through limited pairwise relationships, this study adopts a holistic perspective by analyzing their simultaneous and higher-order interactions, providing a deeper and more nuanced understanding of how organizational performance is shaped across different contextual conditions. Furthermore, the study reframes the role of accounting information quality, positioning it not merely as a technical reporting attribute but as a contextual factor capable of influencing the strength and direction of the strategy–performance relationship, particularly under varying levels of environmental uncertainty, thereby broadening theoretical understanding by viewing accounting information quality as an active component in shaping strategic outcomes rather than a passive measurement tool. Methodologically, the study contributes by developing comprehensive composite measures for strategic orientation and strategic performance in the banking sector, addressing limitations in prior research that relied on overly simplified indicators and enhancing the explanatory power of empirical models examining complex interaction effects among strategic, informational, and environmental variables. Finally, the study extends the application of contingency theory by testing it in a high-uncertainty banking environment, a context that remains underexplored relative to more stable settings, thus providing new empirical

evidence from a challenging and rarely studied environment.

4.2. Practical Significance

Practically, this study provides a framework that can help banking decision-makers better understand how strategic orientation interacts with accounting information quality and environmental uncertainty to influence performance. Such insights support more context-sensitive strategic choices, particularly in volatile and rapidly changing environments. Moreover, the findings underscore that accounting information quality is not merely a technical accounting concern but a determinant of strategic decision effectiveness. Enhancing the reliability and usefulness of accounting information can improve decision quality and reduce ambiguity, offering a strong rationale for investing in more robust AISs. In addition, the composite measures developed in this study offer practical tools for internal evaluation, strategic planning, and managerial control within banks. At the regulatory level, the results can inform policymakers and supervisory bodies about how the interplay between information quality, environmental uncertainty, and strategic behavior shapes bank performance, thereby supporting the design of more effective oversight frameworks. Finally, in the Syrian context, the study provides actionable insights that may help banks navigate a highly unstable environment by improving the use of accounting information in decision-making and strengthening their capacity to respond to uncertainty.

5. THEORETICAL FRAMEWORK AND HYPOTHESES

5.1. Strategic Performance (SP)

SP is widely recognized in the strategic management literature as a core construct that reflects an organization's ability to transform its strategy into meaningful and sustained outcomes. It captures not only the outcomes of planning and implementation processes but also the extent to which these outcomes reflect effectiveness, competitive advantage, and long-term sustainability. Over time, the concept has evolved beyond a narrow financial interpretation to encompass a broader, multidimensional perspective that includes financial and non-financial outcomes such as profitability, growth, stakeholder satisfaction, and social and environmental contributions, consistent with the stakeholder view of performance (Santos & Brito, 2012; Taouab & Issor, 2019). This evolution reflects a shift toward understanding performance as a composite construct shaped by strategic decisions,

implementation quality, and organizational adaptability.

Early research in this area primarily relied on traditional financial indicators, such as return on investment and return on assets. However, these measures have been criticized for their backward-looking nature and their inability to adequately reflect the quality of strategic decision-making or future-oriented organizational potential (Chakravarthy, 1986). In response to these limitations, the Balanced Scorecard framework broadened the scope of performance measurement by incorporating non-financial dimensions related to customers, internal processes, and learning and growth, thereby strengthening the link between strategy formulation and performance evaluation (Kaplan & Norton, 1992; Kaplan & Norton, 1996; Micheli & Manzoni, 2010). More recent developments in the literature emphasize that effective SP measurement systems are those that integrate financial and non-financial indicators, align them with value drivers, and provide continuous feedback to support managerial decision-making (Baird, 2017).

SP is generally conceptualized as a multidimensional construct composed of several interrelated dimensions. Financial performance remains a fundamental dimension, as it ensures organizational survival and viability; however, it is insufficient on its own to capture the strategic quality or future potential of the organization (Richard et al., 2009; Chakravarthy, 1986). Operational efficiency represents another key dimension, reflecting the organization's ability to convert inputs into value in an effective and sustainable manner, and is closely linked to the success of strategy implementation (Chakravarthy, 1986). Stakeholder satisfaction constitutes a further dimension of SP. From a stakeholder theory perspective, performance extends beyond shareholders to include employees, customers, and broader societal interests, emphasizing the importance of balancing multiple expectations to achieve long-term sustainability (Santos & Brito, 2012). Another important dimension is strategic adaptability and flexibility. Drawing on dynamic capabilities theory, SP depends on an organization's ability to reconfigure its resources and competencies in response to changing environmental conditions (Teece et al., 1997). In this context, innovation and investment in research and development play a crucial role in enabling exploration, renewal, and long-term competitiveness (March, 1991). Similarly, the development of strategic options enhances an

organization's ability to manage uncertainty and exploit emerging opportunities, thereby strengthening its adaptive capacity (Bowman & Hurry, 1993).

In the banking sector, a further dimension becomes particularly relevant, namely risk management and asset quality. Asset quality is a critical indicator of an organization's ability to manage credit and operational risks effectively and is closely linked to financial stability and resilience (Bushman & Williams, 2012). Taken together, these dimensions highlight that SP is not a unidimensional outcome but rather a complex construct that reflects both current effectiveness and the organization's capacity to sustain performance in the future.

5.2. Strategic Orientation (SO)

SO refers to the actual behavioral pattern adopted by an organization in allocating its resources and making decisions to respond to its competitive environment (Miles & Snow, 1978; hereafter M&S). It reflects the organization's approach to innovation, growth, and the pursuit of sustainable competitive advantage (M&S, 1978). Unlike formal or stated strategy, SO captures what the organization actually does in practice. It encompasses multiple organizational dimensions, including structure, technology, processes, and decision-making mechanisms, and provides an important lens through which to understand how organizations interact with environmental opportunities and threats. In this regard, SO is closely linked to management accounting and information systems that support organizational decision-making (Chenhall, 2003).

The literature emphasizes that strategy is not merely a contextual variable, but also a means through which managers actively influence the external environment, organizational structure, technology, and control systems, including management accounting systems (Chenhall, 2003). A wide range of strategic typologies has been developed in the literature, including entrepreneurial and conservative strategies (Miller & Friesen, 1982), prospectors, analyzers, defenders, and reactors (M&S, 1978), build-harvest strategies (Gupta & Govindarajan, 1984), and differentiation versus cost leadership strategies (Porter, 1980). Despite their differences, these classifications generally reflect a continuum of strategic posture ranging from highly defensive and reactive behavior to highly proactive and aggressive orientations aimed at achieving competitive advantage.

This study adopts the M&S (1978) typology, which classifies SO into four types: prospectors, analyzers, defenders, and reactors. This classification is adopted for several reasons. First, it is comprehensive as it integrates strategy with organizational structure and processes, providing a solid foundation for linking SO with information requirements. Second, it shares conceptual similarities with most other well-established typologies in the literature (Jusoh, 2010), making it widely applicable and theoretically robust.

According to Al-Qaryouti (2009, p. 391), Organizations classified as reactors typically lack a clear strategic vision or consistent decision-making framework. Their behavior is often characterized by centralization, formalization, and a reactive approach to environmental changes. Such firms tend to respond to opportunities and threats in an ad hoc manner, resulting in inconsistent and often ineffective strategic behavior. Defender-oriented organizations, in contrast, focus on a narrow and stable market domain. They emphasize efficiency, control, and the protection of existing customers rather than innovation or expansion. Decision-making in such firms is typically centralized, with limited delegation, and the primary objective is maintaining stability and operational efficiency. By contrast, prospector and analyzer organizations adopt a more proactive and exploratory posture. Prospectors are characterized by continuous innovation, risk-taking, and active search for new market opportunities. They invest heavily in environmental scanning and organizational flexibility to support change and innovation. Analyzers, on the other hand, maintain a balance between stability and innovation, combining elements of both defensive and offensive strategies.

Prior research suggests that proactive strategic orientations require more flexible and sophisticated management accounting and control systems that support innovation, responsiveness, and strategic decision-making (Qian & Burritt, 2009). In this sense, SO plays a defining role in shaping the design and use of AISs, as different strategies generate different informational needs and control requirements. More recent literature further emphasizes that each strategic type differs significantly in its information requirements, risk tolerance, and organizational design. Prospectors rely on broad, externally oriented, and forward-looking information systems, while defenders depend more heavily on internally focused financial information

that supports efficiency and stability. Analyzers require hybrid information systems that combine both perspectives, whereas reactors often suffer from weak information systems and a lack of strategic coherence (M&S, 1978; Chenhall, 2003; Qian & Burritt, 2009). These differences in informational structure provide a critical foundation for understanding the relationship between SO and AIQ, which is central to this study.

5.3. The Relationship between SO and SP

The strategic management literature, both classical and contemporary, widely acknowledges that SO represents a key determinant of organizational performance. Meta-analytic evidence suggests a generally positive relationship between SO and performance; however, the strength of this relationship varies depending on how performance is conceptualized and measured (George et al., 2019). This variation can be explained through the distinction between organizational effectiveness and operational efficiency. SO appears to be more strongly associated with long-term goal achievement and effectiveness, whereas its direct influence on short-term efficiency is less pronounced (Venkatraman & Ramanujam, 1986).

In this regard, the literature emphasizes that multidimensional performance measures, incorporating both financial and non-financial indicators, are better suited to capturing the true impact of SO compared to narrow financial metrics alone (Kaplan & Norton, 1992; Richard et al., 2009). SP measurement systems further reinforce this relationship by enhancing alignment between strategy formulation and implementation processes (Poister, 2010; Pollanen et al., 2017). Recent studies also suggest that the integration between strategic management and performance management systems constitutes a critical condition for achieving sustained organizational performance (Biondi & Russo, 2022; Sinnaiah et al., 2023).

Empirical evidence from the banking sector indicates that competitive strategy types, particularly those derived from Porter's framework, are directly associated with performance outcomes. Cost leadership strategies, for instance, have been shown to generate more stable and sustained performance advantages compared to differentiation or focus strategies, which tend to produce more variable results over time (Majeed et al., 2018; Karyani & Rossieta, 2018; Powers & Hahn, 2004). Similarly, effective strategic planning—especially when linked to clear differentiation strategies—enhances competitive positioning and overall bank performance

(Waisapi, 2024). Moreover, corporate social responsibility and operational excellence have been identified as mediating mechanisms that strengthen the impact of competitive strategies on performance, particularly within Islamic banking contexts (Ivascu et al., 2022).

From the perspective of the M&S typology, performance differences across strategic orientations are also well documented. Prospectors are generally associated with higher performance due to their emphasis on innovation and market expansion, whereas defenders and analyzers tend to exhibit more stable but less dynamic performance outcomes. Reactors, by contrast, are consistently linked to lower levels of performance due to their lack of strategic coherence and proactive behavior (Kiptui, 2014). The literature further suggests that organizational culture can moderate this relationship, as the alignment between a control-oriented culture and a prospector strategy may enhance performance outcomes (Kiptui, 2014). In addition, technological and marketing capabilities influence performance differently depending on strategic type, with technological capabilities benefiting prospectors and marketing capabilities being more advantageous for defenders (Song et al., 2007).

Early banking studies provide further insight into this relationship. James and Hatten (1994) argue that bank performance is not determined solely by strategy or environment in isolation, but rather by the interaction between SO, decision-making processes, and environmental conditions. Similarly, Hatten et al. (2004) demonstrate that the effects of SO become more evident over the medium to long term, and that the quality of implementation and strategic control systems plays a critical role in translating strategic intent into observable performance outcomes. Supporting this view, Abernethy and Guthrie (1994) highlight that alignment between strategy and internal management control systems is a key prerequisite for superior performance.

Overall, empirical findings consistently indicate that performance differences across strategic orientations are not merely the result of strategic choice itself, but rather depend on the organization's ability to effectively translate that choice into coherent implementation practices. Prospectors, for example, often face greater implementation challenges due to environmental uncertainty and product complexity, whereas defenders benefit from stable processes and well-defined risk structures, leading to more consistent performance patterns (James & Hatten, 1994; Hatten et al., 2004; Abernethy

& Guthrie, 1994).

Taken together, these studies suggest that SO, understood as the actual behavioral pattern of resource allocation and decision-making, represents a fundamental determinant of strategic performance. It shapes how organizations respond to environmental opportunities, enhances adaptability, and ensures alignment between strategy formulation and execution. Accordingly, the following hypothesis is proposed:

H₁: SO has a positive and statistically significant effect on SP.

5.4. Accounting Information Quality (AIQ)

AIQ is a central concept in financial accounting literature; however, there is no universally agreed-upon definition, largely because it is considered a latent construct that cannot be directly observed. Instead, it is inferred through its economic consequences or through observable characteristics of financial reporting and firms' accounting behavior (Dechow et al., 1995; Francis et al., 2004). The concept is grounded in the decision-usefulness approach to financial reporting, which posits that the primary objective of accounting information is to provide users with relevant inputs for rational economic decision-making (Staubus, 2000; Beaver, 2002).

In this context, both the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) adopt this perspective in their conceptual frameworks, defining AIQ in terms of two fundamental qualitative characteristics: relevance and faithful representation (IASB, 2018). Relevance refers to the ability of information to influence users' decisions through its predictive and confirmatory value, thereby supporting both performance evaluation and future forecasting. Faithful representation, on the other hand, requires that information accurately reflects the economic substance of transactions in a complete, neutral, and error-free manner, thereby enhancing the reliability of financial reports (FASB, 2010; IASB, 2018).

The literature suggests that the relationship between relevance and faithful representation is not always complementary; rather, it often involves a practical trade-off. Enhancing one characteristic may come at the expense of the other, particularly in environments characterized by high uncertainty or significant reliance on managerial estimates (Schipper & Vincent, 2003; Scott, 2015). This tension represents one of the fundamental challenges in

financial reporting quality.

Accounting conservatism constitutes another important dimension of AIQ. It reflects the tendency of accounting systems to recognize potential losses more quickly than gains, thereby limiting excessive optimism in financial reporting. Conservatism is widely viewed as a mechanism that enhances reliability by reducing the risk of asset and income overstatement (Basu, 1997; Watts, 2003). The literature distinguishes between conditional conservatism, which involves timely recognition of losses upon the emergence of negative signals, and unconditional conservatism, which arises from accounting policies that systematically understate net assets (Basu, 1997). Conservatism has a dual effect on AIQ. On the one hand, it may enhance quality by mitigating earnings overstatement and reducing information asymmetry between managers and external users (LaFond & Watts, 2008). On the other hand, it may be used opportunistically as a tool for earnings management or income smoothing, thereby undermining information quality (García Lara et al., 2009).

Two main approaches are commonly used in the literature to measure AIQ. The first is the market-based approach, particularly value relevance, which examines the extent to which accounting numbers are reflected in stock prices under the assumption that higher-quality information is more strongly associated with market valuation (Barth et al., 2001; Beaver, 2002). The second approach focuses on financial reporting behavior, particularly earnings management, as an inverse proxy for information quality (Healy & Wahlen, 1999; Dechow et al., 2010). Within this framework, discretionary accruals are widely used to isolate the portion of earnings that is not justified by underlying economic performance, reflecting managerial discretion in reporting (Jones, 1991; Kothari et al., 2005).

In the banking sector, loan loss provisions (LLPs) represent a particularly important setting for assessing AIQ, as they rely heavily on forward-looking estimates of credit risk and managerial judgment (Beatty & Liao, 2014; Bushman & Williams, 2012). The unexplained component of LLPs (residuals) is commonly interpreted as a deviation from expected economic behavior, where higher absolute residual values indicate lower AIQ (Dechow et al., 2010; Beatty & Liao, 2014).

Although International Financial Reporting Standards (IFRS) aim to enhance faithful representation and comparability, they still provide

managers with considerable discretion in judgment-based items such as accruals and loan loss provisions (IASB, 2018). This discretion can improve information quality when used to convey private information about future performance; however, it may also create opportunities for opportunistic earnings management (Barth et al., 2008; Ewert & Wagenhofer, 2005). The literature presents two contrasting perspectives regarding this issue. The first argues that greater accounting flexibility, when supported by strong governance mechanisms, improves the ability of financial reports to reflect economic reality, thereby enhancing information quality (Pelucio-Grecco et al., 2014; Key & Kim, 2020). The second perspective suggests that such flexibility may be exploited opportunistically, increasing earnings management and reducing reporting quality (Callao & Jarne, 2010; Cang et al., 2014; Ewert & Wagenhofer, 2005).

Importantly, several studies emphasize that accounting judgment is not inherently opportunistic. Rather, it can reflect the ability of accounting systems to incorporate private information and adapt to environmental conditions (Fields et al., 2001; Nelson, 2003; Kothari, 2001). Within principles-based standards, this flexibility becomes particularly relevant, as it allows financial reports to better capture the economic substance of transactions (Cohen et al., 2013; Lawalata et al., 2024). Empirical evidence further suggests that, when exercised within strong governance and control environments, accounting flexibility enhances the informational value of financial reporting by improving relevance and enabling better communication of firm-specific information (Cabán, 2024; Kim, 2016). However, the effect of such flexibility is highly contingent on the institutional context. In the absence of effective monitoring, it may instead facilitate opportunistic behavior and reduce AIQ (Ewert & Wagenhofer, 2005; Callao & Jarne, 2010).

Accordingly, this study adopts a contextual perspective rooted in management accounting and information systems literature. From this viewpoint, AIQ is not merely a function of reduced discretion or conservatism, but rather a dynamic balance between reliability, adaptability, and decision usefulness. This balance enables organizations to respond effectively to environmental uncertainty while simultaneously supporting strategic performance.

5.5. The Relationship between SO, AIQ, and SP

Prior research suggests that different strategic orientations impose distinct informational requirements on organizations due to variations in activity structures, risk exposure, and environmental complexity (M&S, 1978; Chenhall, 2003; Qian & Burritt, 2009). Organizations adopting a prospector orientation emphasize innovation, opportunity exploration, and decision-making under high uncertainty, which necessitates access to broad-scope information, including external, forward-looking, and non-financial indicators. In contrast, defender-oriented organizations prioritize operational efficiency and stability, relying more heavily on internally generated, historically oriented financial information to support control and operational discipline. Analyzer organizations attempt to balance exploration and exploitation, whereas reactor organizations often suffer from weak strategic alignment and underdeveloped information systems.

Against this backdrop of heterogeneous informational demands, AIQ emerges as a critical factor shaping the ability of each strategic type to achieve effective performance. Traditional literature consistently emphasizes that high-quality information enhances transparency, reduces information asymmetry, and improves the quality of strategic decision-making, thereby contributing positively to organizational performance (Bushman & Smith, 2001; Biddle et al., 2009).

However, more recent research challenges the notion of AIQ as a simple linear construct, instead advancing a more nuanced perspective in which information system characteristics are fundamentally shaped by both SO and environmental conditions. Empirical evidence indicates that organizations with exploratory (prospector-like) orientations operating in dynamic and uncertain environments tend to rely more extensively on accounting discretion and judgment in financial reporting, reflecting their dependence on flexible and forward-looking information (Wu et al., 2015; Purba et al., 2021; Tian, 2024). Conversely, defender-oriented organizations exhibit higher levels of reporting discipline and AIQ, consistent with lower uncertainty and more stable operational contexts (Braga et al., 2023; Janakiraman et al., 2025).

Accordingly, SO does not merely influence the type of information required; it also shapes the broader informational environment within which accounting systems operate, including the extent of reliance on accounting

estimates and the resulting quality of reported information. In this regard, emerging literature positions AIQ not simply as a technical attribute, but as a structural mechanism that helps explain organizational outcomes, functioning as either a moderator or mediator in the relationship between strategic orientation and performance (Kwakye & Ahmed, 2023; Puspitawati, 2021; Reskino, 2021).

From a more advanced accounting perspective, the literature further suggests that information quality is not inherently associated with lower levels of accounting discretion. Rather, the judicious use of professional judgment within the boundaries of accounting standards may serve a functional and even beneficial role, particularly in high-uncertainty environments. For instance, non-opportunistic earnings management practices—such as income smoothing—can reduce volatility in reported earnings and provide a more stable representation of performance, thereby supporting the implementation of long-term strategic initiatives (Rahman et al., 2013). Similarly, professional judgment may convey private information about future performance or mitigate the short-term effects of economic shocks, contributing to organizational stability and discipline (Callao, 2010; VanOosterbosch, 2010).

In the banking sector, accounting discretion—particularly in the estimation of loan loss provisions (LLP)—can be interpreted as a reflection of managerial judgment in assessing future credit risk. Deviations from expected values in LLP models (LLP residuals), especially in absolute terms, are commonly used as an inverse proxy for AIQ, with higher values indicating greater levels of discretionary estimation. Nevertheless, such flexibility may also carry a functional dimension when exercised within non-opportunistic bounds, contributing to financial stability, reducing procyclicality, and supporting long-term strategic planning (Beatty & Liao, 2014; Bushman & Williams, 2012).

Moreover, empirical evidence suggests that smaller banks pursuing customer-oriented strategies tend to achieve higher profit margins compared to larger banks focused on productivity and operational efficiency, although such strategies may introduce challenges related to aligning information technology with strategic priorities (Tallon, 2010). These findings underscore the importance of aligning SO with organizational characteristics and capabilities.

Taken together, the preceding discussion suggests that accounting information quality—understood as a blend of its qualitative attributes and the degree of professional judgment embedded in its preparation—does not operate solely through a direct effect on strategic performance. Rather, it also may shape how SO is translated into performance outcomes. When the characteristics of the AIS are aligned with the informational demands of a given SO, organizations are better able to convert strategic intentions into effective results. Such alignment enhances decision quality, reduces uncertainty, and supports more efficient resource allocation. Accordingly, the following hypotheses are proposed:

H₂: AIQ is significantly associated with SP.

H₃: AIQ moderates the relationship between SO and SP.

5.6. EU and Its Relationship with SO, AIQ, and SP

Environmental uncertainty (EU) is widely regarded as a central construct in management and management accounting literature, where it is typically conceptualized as a key determinant of organizational information requirements and the design of AISs within the framework of contingency theory (Chenhall, 2003). It reflects the extent to which external environmental changes are difficult to predict or managerial outcomes are difficult to anticipate, mainly due to information deficiencies, ambiguous causal relationships, and volatile surrounding conditions (Duncan, 1972; Milliken, 1987).

The literature distinguishes between two main forms of EU: objective environmental uncertainty, which captures the actual characteristics of the external environment such as market volatility, macroeconomic instability, and technological change; and perceived environmental uncertainty (PEU), which reflects top management's perception of ambiguity and unpredictability in the environment. This distinction suggests that the behavioral consequences of uncertainty are driven less by objective conditions themselves and more by how such conditions are interpreted by decision-makers (Gul & Chia, 1994; Milliken, 1987).

From a contingency theory perspective, the environment is not treated as a static external constraint, but rather as a dynamic source of informational pressure that shapes organizational information needs. As EU increases, managerial demand for broader, more integrated, timely, and forward-

looking information tends to rise, in order to support decision-making under conditions of ambiguity and rapid change (Chenhall & Morris, 1986). In this context, EU extends its influence to the design of AISs and managerial discretionary behavior, particularly in areas that rely heavily on estimation and professional judgment such as loan loss provisions (LLP). Prior research suggests that higher levels of EU are associated with greater reliance on accounting estimates and increased flexibility in applying accounting standards, which is reflected in higher discretionary provisioning (Ghosh & Olsen, 2009). Management may also use such flexibility to reduce earnings volatility and achieve greater stability in reported performance, reflecting a functional role of accounting discretion in unstable environments. However, the use of accounting flexibility does not necessarily improve AIQ in the traditional sense of objectivity and verifiability. Instead, tensions may arise between relevance, which relies on forward-looking estimation, and reliability, which emphasizes verifiability and neutrality. This tension is particularly evident in accounting domains such as provisions, impairment, and accruals, where reported information becomes highly sensitive to managerial judgment (Beatty & Liao, 2014).

Consistent with this view, prior studies show that EU is associated with changes in financial reporting behavior, including greater use of discretionary accruals in unstable environments (Ghosh & Olsen, 2009), while capital markets tend to place greater value on more forward-looking accounting information under higher uncertainty conditions (Habib et al., 2011). However, the empirical evidence remains mixed: some studies report no stable relationship between EU and earnings management (Ghani et al., 2017), whereas others document a positive association driven by managerial pressure to manage reported performance (Surbakti & Sudaryati, 2021). These inconsistencies suggest that the effect is highly context-dependent and sensitive to measurement choices. Accrual accounting plays a central role in explaining managerial responses to EU, as accounting standards provide managers with discretion in applying professional judgment in financial reporting (Healy & Wahlen, 1999). Prior research indicates that such discretion is sometimes used to smooth earnings over time, thereby reducing volatility in reported results (Bannister & Newman, 1996). This smoothing behavior may benefit both managers and investors by reducing perceived risk and enhancing performance stability (Dye, 1988; DeFond &

Park, 1997; Trueman & Titman, 1988; Goel & Thakor, 2003).

Recent literature further emphasizes that strategic flexibility—across dimensions such as banking services, competitive positioning, investment decisions, and human resource adaptability—represents a form of SO that contributes to financial, operational, learning, and sustainable performance (Mohsin et al., 2022). These findings highlight the importance of an organization's ability to reconfigure resources in response to environmental changes as a key driver of superior performance. In a similar vein, evidence suggests that advanced AISs tend to have a stronger positive impact on managerial performance under conditions of high EU compared to stable environments, underscoring the importance of interaction between system characteristics and environmental conditions (Gul & Chia, 1994; Agbejule, 2005). More recent studies indicate that AIQ may serve as a mediating mechanism in the relationship between AISs, EU, and managerial performance, such that the direct effect of uncertainty may not be fully observable without accounting for this interaction (Zahra et al., 2025). Other evidence suggests that accounting systems can mitigate the adverse effects of EU on managerial performance and enhance the effectiveness of budget participation (Hady & Fisher, 2025). Overall, the literature consistently highlights the complexity of the relationship between EU and AISs, which depends on system characteristics, managerial practices, and organizational structure (Hadianto & Djuminah, 2023; Gul, 1991; Salim, 2024).

In the banking sector, recent evidence indicates that EU strengthens the effect of strategic orientation on performance, with prospector strategies being more effective in high-uncertainty environments (Marten & Sutrisno, 2022; Amir et al., 2022). This aligns with broader findings that an organization's ability to reconfigure resources and respond to environmental changes—at the core of strategic flexibility—is essential for achieving superior performance under unstable conditions (Mohsin et al., 2022).

Taken together, EU is not limited to influencing the design of AISs and AIQ, but may also shape managerial incentives and discretionary behavior, including earnings management practices, which in turn indirectly affect organizational performance through increased decision complexity and greater reliance on information quality. Accordingly, EU can be viewed as a contextual factor that potentially reshapes the relationships among SO, AIQ, and SP through its influence on the use of accounting estimates and the

alignment between information system characteristics and environmental demands. Accordingly, the following hypotheses are proposed:

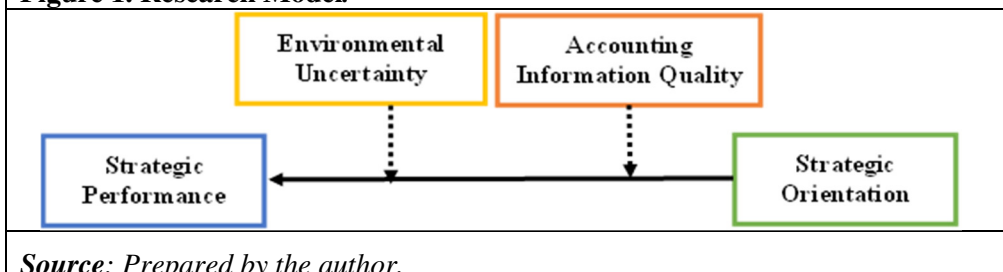
H₄: EU has a statistically significant effect SP.

H₅: EU moderates the relationship between SO and SP.

H₆: EU moderates the relationship between AIQ and SP.

H₇: EU affects the interaction between SO and AIQ in influencing SP.

Figure 1. Research Model.



Source: Prepared by the author.

6. METHODOLOGY

6.1. Research Design and Sampling

This study adopts a quantitative panel-data design to analyze the relationships among SO, EU, AIQ, and bank performance. The population includes all Syrian conventional banks listed on the Damascus Securities Exchange. Using a census approach, the final sample covers 11 banks over the period 2012–2024. Due to the absence of 2024 disclosures for Syria Gulf Bank, the dataset forms an unbalanced panel of $(11 \text{ banks} \times 13 \text{ years}) - 1 = 142$ observations, which remains sufficient for estimating interaction-based panel models and multidimensional constructs such as SO and SP.

6.2. Measurement of Variables

6.2.1. Strategic Performance

Strategic Performance (SP) is conceptualized as a multidimensional formative construct capturing the extent to which banks achieve sustainable financial and operational outcomes aligned with long-term strategic objectives. Consistent with strategic-management and accounting literature emphasizing multidimensional performance frameworks (Kaplan & Norton, 1996; Hitt et al., 2011; Govindarajan, 1988), SP is treated as an aggregate outcome emerging from the interrelated dimensions of financial strength, liquidity, operational efficiency, and asset quality. Accordingly, SP is operationalized using archival financial-statement indicators and

constructed as a composite index that reflects banks' latent strategic position over time, ensuring objectivity and comparability across institutions and periods. The construct comprises three core dimensions aligned with the functional logic of banking operations.

1. **Financial strength and liquidity**, capturing capital adequacy, funding stability, leverage, and liquidity, measured through CAR, Deposits-to-Assets, Leverage, Liquidity Ratio, and Loan-to-Deposit Ratio.
2. **Operational efficiency**, reflecting the bank's ability to generate returns from assets and equity, measured through NIM, ROA, and ROE (Kaplan & Norton, 1996).
3. **Asset quality**, representing credit-risk exposure and portfolio soundness, measured through the NPL ratio and Loan Loss Provisions to Total Loans.

Operational definitions and formulas are presented in Table 1. Given the non-interchangeable nature of these indicators, SP is modeled as a formative composite construct. To validate the structure and reduce multicollinearity, Principal Component Analysis (PCA) was applied. Initially, ten indicators were included; however, the Loan Loss Provisions to Total Loans ratio showed low communality (0.359) and was removed following established guidelines for composite index construction (Hair et al., 2021; Jolliffe & Cadima, 2016). The remaining nine indicators demonstrated satisfactory communalities (>0.50). All variables were standardized using Z-scores, and the NPL ratio was reverse-coded to ensure consistent interpretation. PCA results are reported in Table 2.

Indicator	SD	Measurement Formula	ES	RC	Interpretation
Capital Adequacy Ratio (CAR)	FS	Capital / Risk-Weighted Assets	+	No	Capital resilience and regulatory strength
Deposits-to-Assets Ratio	Liquidity	Deposits / Total Assets	+	No	Stability of funding base
Leverage Ratio	FS	Total Assets / Equity	–	No	Higher leverage reflects increased financial risk
Liquidity Ratio	Liquidity	Liquid Assets / Short-term Liabilities	+	No	Ability to meet short-term obligations
Loan-to-Deposit Ratio	Liquidity	Loans / Deposits	–	No	Higher values indicate funding pressure
Net Interest Margin (NIM)	OE	Net Interest Income / Earning Assets	+	No	Core banking profitability
Return on Assets	OE	Net Income / Total	+	No	Efficiency in asset

(ROA)		Assets			utilization
Return on Equity (ROE)	OE	Net Income / Equity	+	No	Shareholder value creation
NPL Ratio	Asset Quality	Non-Performing Loans / Total Loans	–	Yes	Credit risk (reverse-coded to reflect quality)
<i>Notes: SD = Strategic Dimension; ES = Expected Sign; RC = Reverse Coded; Operational Efficiency = OE; Financial Structure = FS.</i>					
Table 2. PCA Results for Strategic Performance					
Indicator		Communality	Loading on Component 1		
Zscore(CAR)		0.863	0.873		
Zscore(DEPOSITS_TO_ASSETS)		0.939	–0.951		
Zscore(LEVERAGE)		0.929	–0.942		
Zscore(LIQUIDITY_RATIO)		0.578	0.628		
Zscore(LOAN_TO_DEPOSIT)		0.798	–0.047		
Zscore(NIM)		0.681	0.562		
Zscore(ROA)		0.862	0.71		
Zscore(ROE)		0.886	0.443		
Zscore(ADJ_NPL_TOLOANS)		0.744	0.052		
Note. Kaiser–Meyer–Olkin (KMO) = 0.745; Bartlett’s Test of Sphericity: $\chi^2(36)$ = 1076.073, p < 0.001. Variance explained by Component 1 = 44.12%; Cumulative variance explained by Components 1–3 = 80.88%. Extraction Method: Principal Component Analysis.					
<i>Source: Prepared by the author based on SPSS output.</i>					

The first principal component was retained as the composite SP index due to its dominant explanatory power (44.12%) and theoretical interpretability. Communalities exceeded recommended thresholds, and the KMO value (0.745) and significant Bartlett’s test confirmed sampling adequacy. Loadings indicate that SP in Syrian banks is primarily driven by financial resilience and operational efficiency, with asset quality contributing as a complementary dimension. Overall, SP emerges as a composite outcome shaped mainly by balance-sheet strength and efficiency, with asset quality reinforcing long-term stability—an especially relevant pattern in environments characterized by economic uncertainty and structural constraints.

6.2.2. Strategic Orientation

Building on the strategic typology developed by Miles and Snow (1978, 2003), this study conceptualizes SO as a **continuous behavioral construct** reflecting the extent to which organizations exhibit Prospector-

like versus Defender-like strategic characteristics. Rather than relying on discrete categorical classifications, this approach captures strategy as a persistent pattern of resource allocation and decision-making embedded in firms' observable behavior over time. Consistent with prior archival research in accounting and management (Ittner et al., 1997; Wu, 2012; Bentley et al., 2013), SO is operationalized using financial indicators that reflect managerial choices related to growth, risk-taking, operational intensity, capital structure, and human capital deployment. This approach mitigates concerns associated with perceptual or survey-based measures and allows for a more objective and longitudinal representation of strategic behavior. To ensure contextual relevance, the measurement framework is adapted to the institutional characteristics of the banking sector, while remaining theoretically anchored in the M&S paradigm. From a measurement perspective, SO is modeled as a formative construct, whereby each indicator captures a distinct and non-interchangeable dimension of strategic behavior. Accordingly, the omission of any component would result in an incomplete representation of the underlying construct, as firms may simultaneously exhibit heterogeneous strategic characteristics across different operational domains.

An initial set of ten financial indicators was identified to capture the multidimensional nature of strategic behavior in banking institutions. These indicators represent core theoretical dimensions associated with Prospector and Defender orientations, including growth aggressiveness, risk exposure, operational flexibility, human capital intensity, and capital rigidity. To assess the empirical structure of these indicators and reduce redundancy, **Principal Component Analysis (PCA)** was employed as a data reduction technique. Following established methodological guidelines (Hair et al., 2019; Jolliffe & Cadima, 2016), indicators with low communalities and factor loadings below 0.40 on the first principal component were excluded. While more stringent thresholds are sometimes adopted, the 0.40 criterion is appropriate in exploratory composite index construction where theoretical coverage is balanced against statistical parsimony. Based on these criteria, the Risk-Weighted Assets Ratio, Non-Interest Income Ratio, and Market-to-Book Ratio were excluded due to their limited contribution to the dominant factor structure. A subsequent re-estimation of the PCA confirmed the stability and coherence of the refined measurement model.

The final specification includes seven indicators distributed across five strategic dimensions: growth, risk-taking, operational efficiency, human

capital, and capital structure. These indicators collectively capture firms' positioning along the Defender–Prospector continuum. Notably, while certain indicators exhibit moderate factor loadings, they were retained due to their strong theoretical relevance in capturing key aspects of strategic behavior that may not be fully reflected in purely statistical criteria. This approach ensures that the construct remains conceptually comprehensive while maintaining empirical validity. The operational definitions of these indicators are presented in Table 3.

Table 3. Operational Definition of Strategic Orientation					
Strategic Dimension	Variable	Measurement Equation	Interpretation	ED	RC
Growth	Asset Growth	$(\text{TotalAssets}_t - \text{TotalAssets}_{t-1}) / \text{TotalAssets}_{t-1}$	Expansion in firm size and total operations	+(Pro)	No
Growth	Revenue Growth	$(\text{Revenue}_t - \text{Revenue}_{t-1}) / \text{Revenue}_{t-1}$	Market expansion and income generation capability	+(Pro)	No
Risk	New Loan Ratio	$(\text{Loans}_t - \text{Loans}_{t-1}) / \text{TotalAssets}_t$	Credit expansion and risk-taking behavior	+(Pro)	No
Efficiency	Operating Expense Intensity	$\text{OperatingExpenses}_t / \text{Revenue}_t$	Investment in operations	+(Pro)	No
Human Capital	Employees to Assets	$\text{Employees}_t / \text{TotalAssets}_t$	Human capital intensity and flexibility	+(Pro)	No
Human Capital	Employee Stability	$1 - (\text{Employees}_t - \text{Employees}_{t-1}) / \text{Employees}_{t-1} $	Workforce stability and defensive orientation	+(Def)	Yes
Capital Structure	Fixed Assets Ratio	$\text{FixedAssets}_t / \text{TotalAssets}_t$	Capital rigidity and structural conservatism	+(Def)	Yes
Note. Reverse coding was applied to indicators reflecting defensive behavior to ensure that higher values consistently represent a more exploratory (Prospector-oriented) strategic orientation. Pro = Prospector; Def = Defender; ED = Expected Direction; RC = Reverse Coded.					
Source: Prepared by the author.					

A five-year moving average was applied to each indicator to smooth short-term fluctuations and better capture persistent strategic behavior. All variables were subsequently standardized using Z-score transformation to ensure comparability across different measurement scales. Reverse coding was applied to defensively oriented indicators—specifically Employee Stability and Fixed Assets Ratio—so that higher values consistently reflect stronger Prospector-like SO. This transformation aligns all indicators along a unified dimension of strategic aggressiveness and organizational adaptability.

PCA results indicate an adequate underlying structure for index construction. Sampling adequacy is supported by a Kaiser–Meyer–Olkin (KMO) value of 0.645, and Bartlett’s Test of Sphericity is statistically significant ($\chi^2 = 331.605$, $df = 21$, $p < 0.001$), confirming sufficient intercorrelations among variables. The first principal component explains 44.02% of the total variance, while the first two components jointly account for 68.02%, indicating a reasonably strong factor structure in the context of multidimensional strategic constructs. The detailed PCA results are reported in Table 4.

Table 4. Results of Principal Component Analysis for SO Indicators		
Indicator	Communality	Loading on Component 1
Zscore(MA_ASSETS_GR)	0.846	0.852
Zscore(MA_EMP_STABILITY)	0.503	−0.319
Zscore(MA_EMPTOASSETS)	0.844	−0.884
Zscore(MA_FIX_TOTOTALASST)	0.509	0.448
Zscore(MA_NEWLOAN_RATIO)	0.808	0.875
Zscore(MA_OPERATING_EXP_INTENSITY)	0.425	−0.425
Zscore(MA_REVENUE_GR)	0.826	0.57
Note. Kaiser–Meyer–Olkin (KMO) = 0.645; Bartlett’s Test of Sphericity: $\chi^2(21) = 331.605$, $p < 0.001$. Variance explained by Component 1 = 44.02%; Cumulative variance explained by Components 1–2 = 68.02%. Extraction Method: Principal Component Analysis.		
Source: Prepared by the author based on SPSS output.		

Accordingly, the **first principal component is retained as the composite index of SO**, given its dominant explanatory power and clear theoretical interpretability. Higher values of the index indicate a stronger Prospector orientation—characterized by higher growth rates, increased loan expansion, and greater operational dynamism—whereas lower values reflect a Defender orientation associated with structural rigidity, workforce stability, and conservative resource allocation. The resulting index provides a continuous and empirically grounded measure of SO, allowing for more nuanced analysis than traditional categorical classifications. By capturing variation along a strategic continuum, the measure enables the examination of differential strategic positioning across banks and over time. This operationalization is particularly well-suited for panel data analysis, as it reflects persistent behavioral tendencies rather than discrete strategic labels. It also facilitates the investigation of interaction effects with other organizational and environmental variables, including AIQ and EU, which are central to the empirical framework of this study.

6.2.3. Accounting Information Quality

Assessing AIQ in the banking sector presents unique methodological challenges. Unlike non-financial firms, where total accruals models are commonly employed, banks rely heavily on a single accrual—loan loss provisions (LLPs)—which dominates the accrual-generating process. As a result, traditional accrual-based measures are not well suited for capturing the informational properties of bank financial statements. Consistent with prior research that addresses this sector-specific issue (Peña & Franco, 2017; Baig & Khan, 2016; Mongrut & Winkelried, 2019), this study adopts the specific-accruals approach and focuses on the discretionary component of LLPs. The rationale is grounded in extensive evidence showing that LLPs represent the primary channel through which bank managers exercise judgment and discretion, with material implications for reported earnings and risk assessments (Kanagaretnam et al., 2004; vanOosterbosch, 2010). Following Ben Othman and Mersni (2014) and Biswas et al. (2024), the analysis relies on the income-statement measure of LLPs rather than the balance-sheet allowance, as the latter has been shown to add limited explanatory value and may be influenced by reporting incentives unrelated to current-period performance (Beaver & Engel, 1996).

Before presenting the empirical model, it is important to clarify a fundamental conceptual point. Traditional financial accounting research typically treats managerial discretion in accounting estimates as a signal of lower earnings quality, based on the assumption that any room for judgment increases the risk of bias or manipulation. This study adopts a different perspective. Drawing on the accounting information systems (AIS) literature, discretion is viewed not as a flaw in the system but as an inherent functional feature that enables managers to exercise professional judgment in uncertain and rapidly changing environments. From this standpoint, the level of discretion reflects the flexibility of the accounting system, rather than a deviation from an idealized, rule-bound measurement standard. A more flexible system may support timely adaptation, whereas a more rigid one may constrain managerial responsiveness when uncertainty is high.

Stage One: Decomposition of Loan Loss Provisions

To isolate the discretionary component of loan loss provisions, the following model is estimated:

$$LLP_{it} = \beta_0 + \beta_1 LLA_{it-1} + \beta_2 NPL_{it-1} + \beta_3 CHNPL_{it} + \beta_4 CHLOAN_{it} + \beta_5 LCO_{it} + \varepsilon_{it}$$

Where:

LLP_{it}: Total loan loss provisions in period t , scaled by total loans at the beginning of the period.

LLA_{it-1}: Prior-period loan loss allowance, capturing the effect of accumulated conservatism in provisioning behavior.

NPL_{it-1}: Non-performing loans at the beginning of the period, serving as a direct proxy for credit risk exposure.

CHNPL_{it}: Change in non-performing loans between $t-1$ and t , capturing deterioration in asset quality.

CHLOAN_{it}: Change in total loans between $t-1$ and t , reflecting portfolio growth and associated provisioning needs.

LCO_{it}: Write-offs during the period, scaled by beginning-of-period total loans, capturing realized credit losses.

ε_{it} : The error term, representing the unexplained portion of LLPs and interpreted as the discretionary component embedded within the accounting information system.

Stage Two: Construction of the AIS_FLEX Measure

The discretionary component is defined as: $ISDA_{it} = \varepsilon_{it}$.

To capture the magnitude of accounting discretion irrespective of its direction, the absolute value of the residuals is employed: **$AIS_FLEX_{it} = |\varepsilon_{it}|$**

where $ISDA_{it}$ represents signed discretionary accruals derived from the AIS, while AIS_FLEX_{it} reflects the absolute magnitude of accounting discretion, capturing the overall intensity of managerial intervention in financial reporting. The resulting measure—AIS_FLEX—is interpreted as an indicator of accounting information system flexibility. This terminology is intentionally distinct from the conventional “discretionary accruals” label. Whereas the traditional financial accounting literature typically views higher absolute residuals as evidence of lower earnings quality (e.g., Dechow & Dichev, 2002; Francis et al., 2005), the AIS perspective adopted in this study interprets such variation as reflecting the degree to which the system allows managerial judgment and adaptive decision-making.

Importantly, this study does not assume that higher AIS_FLEX is inherently beneficial or harmful. Consistent with contingency theory, the performance implications of accounting system flexibility are expected to depend on the bank’s SO and the level of EU. In highly volatile contexts, greater flexibility may enable managers to respond more effectively to rapid shifts in credit risk, regulatory requirements, and macroeconomic instability. Conversely, excessive discretion may create opportunities for opportunistic behavior or weaken the reliability of financial signals. For this reason,

AIS_FLEX is treated as a contingent factor, whose influence on performance is conditional rather than universal. This conceptualization allows the study to bridge the gap between financial accounting and AIS research by reframing discretionary variation not as a defect in reporting quality, but as a structural characteristic of the accounting information system—one that interacts with organizational strategy and environmental conditions to shape performance outcomes.

6.2.4. Environmental Uncertainty

Environmental uncertainty is proxied using the **coefficient of variation (CV) of firm-level revenues**, which captures the volatility and instability of the external operating environment in which banks operate. Importantly, this measure is designed to reflect fluctuations in underlying economic conditions rather than managerial responses or firm-specific reporting choices. As such, it provides a forward-looking proxy for environmental turbulence that is exogenous to internal accounting decisions. Consistent with prior accounting and management literature, revenue variability has been widely employed as a valid empirical proxy for EU (Habib et al., 2011; Garkaz & Mayvan, 2014; Ghosh & Olsen, 2009; Huang et al., 2017). The use of revenue-based measures is further supported by foundational theoretical work, which argues that variability in core operating outcomes is an appropriate representation of environmental instability faced by firms (Kren, 1992; Milliken, 1987).

Formally, EU is computed as the coefficient of variation of bank revenues, scaled by total assets, over a rolling five-year window:

$$EU(Z_i) = \frac{\sqrt{\sum_{k=1}^5 \frac{(Z_i - \bar{Z})^2}{5}}}{\bar{Z}}$$

where EU (Z_i) denotes the coefficient of variation of revenues for bank i ; Z_{ik} represents revenues of bank i in year k , scaled by total assets; and $\bar{Z}_i$ is the mean of scaled revenues over the preceding five-year period.

The use of a five-year rolling window is motivated by the need to capture persistent, structural variation in the operating environment while mitigating the influence of short-term noise and transitory shocks. This approach ensures that the measure reflects medium-term environmental conditions rather than idiosyncratic annual fluctuations. Higher values of EU(Z_i) indicate greater volatility in operating revenues and, therefore, higher levels of EU. Conversely, lower values reflect more stable and predictable operating environments. Overall, this measure provides a robust and widely

accepted proxy for EU in banking settings, where revenue fluctuations are closely linked to macroeconomic conditions, credit cycles, and financial market dynamics.

7. RESULTS AND DISCUSSION

Before beginning the empirical analysis, the LLP model was estimated to extract the discretionary component (ϵ), which is later used to construct the AIS_FLEX measure. The estimation was carried out using Panel EGLS with cross-sectional weights, selected based on descriptive and diagnostic assessments that highlighted heterogeneity across banks and the unbalanced structure of the panel data. Table 5 presents the first-stage estimation results along with multicollinearity checks and diagnostic tests. The centered VIF values indicate the absence of multicollinearity, while residual diagnostics confirm normality and no cross-sectional dependence. The AR(1) term also demonstrates that the model is dynamically stable. Overall, these results validate the LLP model as an appropriate measurement framework for accurately isolating the discretionary component.

Table 5. LLP Model Estimation, Multicollinearity and Diagnostic Validation			
Panel A: LLP Model Estimates (EGLS)			
Variable	Coefficient	t-Statistic	Centered VIF
C	0.115***	6.17	NA
LCO	0.076*	1.7	1.39
LAST_LLA	-0.610***	-5.72	2.07
LASTNPL	0.173***	2.91	1.81
CHNPL	0.018**	2.07	2.00
CHLOAN	-0.009	-0.77	2.04
AR(1)	0.447***	5.21	1.14
Panel B: Model Diagnostics			
Test	Statistic	p-value	Decision
Jarque–Bera	2.96	0.137	Normality not rejected
Breusch–Pagan LM	72.24	0.0593	No cross-sectional dependence
Pesaran CD	1.140	0.254	No cross-sectional dependence
Levin, Lin & Chu t^*	Constant -8.977***	Cont& Trend -9.191***	Stationary I(0)
AR(1) Root	0.45	—	Model is dynamically stable
Panel C: Model Fit Statistics			
Statistic	Value	Statistic	Value

R ²	0.613	Adjusted R ²	0.537
S.E. of Regression	0.080	Durbin–Watson	2.27
F-statistic	8.046***		
Notes: (1) ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.			
(2) Centered VIF values below 5 indicate absence of multicollinearity concerns. (3) Diagnostic tests are reported to validate the suitability of the model for extracting the discretionary component (ϵ).			
<i>Source: Prepared by the author based on EViews output.</i>			

7.1. Descriptive Statistics

Table 6 reports the descriptive statistics for all variables included in the analysis over the period 2016–2024. Overall, the results indicate notable heterogeneity across banks in the characteristics of the variables under study.

Table 6. Descriptive Statistics of Study Variables (N = 98)				
	SP	SO	AIS_FLEX	EU
Mean	0.154056	2.04E-07	0.055923	0.810009
Median	0.01604	0.01378	0.038279	0.701555
Maximum	3.36429	2.13092	0.219997	2.402315
Minimum	-1.95017	-1.83612	9.45E-05	0.138169
Std. Dev.	0.967344	1.00000	0.052497	0.407083
Skewness	1.309288	0.093106	1.319387	1.257158
Kurtosis	5.113302	2.159464	4.102674	5.253805
<i>Source: Prepared by the author based on EViews output.</i>				

The dependent variable, strategic performance (SP), exhibits a clearly right-skewed distribution, as indicated by the substantial gap between the mean (0.154) and the median (0.016), alongside elevated skewness (1.31) and kurtosis (5.11). These characteristics suggest that high performance is concentrated within a relatively small group of banks, while most observations cluster at lower levels—an expected pattern in sectors marked by performance dispersion and the presence of outliers. In contrast, strategic orientation (SO) displays a more balanced and symmetric distribution, with the mean closely aligned with the median. The skewness (0.09) and kurtosis (2.16) values approximate those of a normal distribution, a result further supported by the Jarque–Bera test ($p = 0.22$), which does not reject the null hypothesis of normality. This relative stability reflects the smoother nature of the underlying components that form the index, reducing extreme

year-to-year fluctuations and allowing clearer differentiation along the Defender–Prospector continuum. Accounting flexibility (AIS_FLEX) shows moderate positive skewness (1.32) and elevated kurtosis (4.10), indicating meaningful cross-sectional variation in managerial discretion embedded in financial reporting. Such variation reflects heterogeneity in accounting judgment across institutional and operational contexts. Environmental uncertainty (EU) also exhibits substantial dispersion and right skewness, reflecting pronounced differences in revenue stability across banks and heterogeneous exposure to macroeconomic and institutional volatility.

7.2. Correlation Analysis

Table 7 presents the Pearson correlation coefficients among the study variables. Strategic orientation shows a positive and statistically significant association with SP ($r = 0.479$, $p < 0.01$), consistent with the M&S framework. Neither accounting flexibility nor EU exhibits significant linear relationships with SP or SO, although EU is negatively associated with AIS_FLEX ($r = -0.232$, $p < 0.05$), suggesting more conservative reporting under higher uncertainty. Overall, the correlation matrix does not reveal multicollinearity concerns, supporting the suitability of the variables for subsequent regression analysis.

Table 7. Correlation Matrix of Variables				
Variable	SP	SO	AIS_FLEX	EU
SO	0.479***	1		
AIS_FLEX	-0.063	0.083	1	
EU	-0.039	-0.094	-0.232**	1
Notes: Values represent Pearson correlation coefficients. ***, **, * denote significance at 1%, 5%, and 10% levels respectively. N = 98 observations.				
Source: Prepared by the author based on EViews output.				

7.3. Cross-Sectional Dependence

Table 8 reports the results of the Pesaran (2004) CD test for cross-sectional dependence.

Table 8. Cross-Sectional Dependence Test (Pesaran CD)			
Variable	CD Statistic	p-value	Decision
SP	21.714	0.000	Dependence
SO	20.423	0.000	Dependence
AIS_FLEX	2.411	0.016	Dependence
EU	19.449	0.000	Dependence

Notes: Pesaran (2004) CD test with null hypothesis of cross-sectional independence.

Source: Prepared by the author based on EViews output.

The results show strong evidence of cross-sectional dependence across all variables, as the null hypothesis is rejected at conventional significance levels. This pattern suggests that the banks in the sample are influenced by common shocks and shared external conditions—an expected outcome given the interconnected nature of the banking sector and the broader macroeconomic environment. Under such circumstances, relying on estimators that assume cross-sectional independence would be inappropriate (Pesaran, 2004). To address this issue, the analysis employs estimation techniques that are robust to cross-sectional dependence, including FMOLS and fixed-effects models with robust standard errors. Although Common Correlated Effects (CCE) estimators are widely recommended for handling unobserved common factors, their implementation is constrained by the short time dimension ($T = 8$) and the relatively small number of cross-sectional units ($N = 11$). As noted by Pesaran (2006), CCE estimators perform more reliably when the time dimension is sufficiently large. Given these limitations, the study adopts a practical alternative by incorporating the cross-sectional mean of strategic performance (SP_BAR) into the model. This variable, calculated as the average SP across all banks in each year, captures time-varying common shocks and serves as a useful proxy for unobserved common correlated effects—particularly in short panels where standard CCE procedures cannot be reliably applied. Regarding stationarity, second-generation panel unit root tests were initially considered because they explicitly account for cross-sectional dependence (Pesaran, 2007). However, the short time span and the difficulty of specifying a stable lag structure limited their applicability. As a result, first-generation unit root tests (LLC, IPS, and Fisher-ADF) are used as a practical alternative commonly applied in short panels (Im et al., 2003). Their results are interpreted with caution, given their assumption of cross-sectional independence, and are complemented by long-run estimation techniques that are robust to cross-sectional dependence.

7.4. Panel Cointegration Test

Table 9 presents the results of the panel cointegration tests conducted using the Kao (1999) and Pedroni (1999, 2004) approaches. In both tests, the null hypothesis assumes no cointegration among the variables.

Table 9. Panel Cointegration Test Results (Kao and Pedroni)			
Test	Statistic	p-value	Decision
Kao Test			
ADF t-statistic	-6.922	0.000	Reject H ₀
Pedroni Test (within-dimension)			
Panel PP-statistic	-5.925	0.000	Reject H ₀
Panel ADF-statistic	-4.455	0.000	Reject H ₀
Pedroni Test (between-dimension)			
Group PP-statistic	-12.463	0.000	Reject H ₀
Group ADF-statistic	-5.679	0.000	Reject H ₀
<i>Source: Prepared by the author based on EViews output.</i>			

The Kao test reports a highly significant and negative ADF statistic, leading to a clear rejection of the null hypothesis. This indicates the presence of a long-run equilibrium relationship among the variables. The Pedroni test results reinforce this conclusion. Within the within-dimension statistics, both the Panel PP and Panel ADF statistics are large in magnitude and statistically significant. Similarly, the between-dimension statistics—Group PP and Group ADF—are also strongly significant. The consistency of these findings across both dimensions provides robust evidence of a stable long-run cointegrating relationship among SP, SO, AIS_FLEX, and EU. This long-run association justifies the use of the Fully Modified OLS (FMOLS) estimator in the subsequent analysis, as it is specifically designed to provide efficient long-run parameter estimates in the presence of cointegration.

7.5. Multicollinearity Diagnostics

Table 10 presents the Variance Inflation Factor (VIF) values across the three model specifications. In Model 1, all VIF values are below 2, suggesting no evidence of multicollinearity concerns in the baseline specification. As interaction terms are introduced in Models 2 and 3, VIF values increase, which is an expected outcome given that interaction terms are mechanically correlated with their constituent variables (Aiken & West, 1991). Although some VIF values exceed conventional thresholds such as 5 or 10, this pattern is generally not regarded as a substantive problem in moderation models. Rather, it reflects the underlying structure of interaction specifications, particularly after mean-centering the variables to mitigate non-essential multicollinearity. In such contexts, elevated VIF values

primarily inflate standard errors without introducing bias into coefficient estimates. Importantly, the results show that key coefficients remain stable in sign and highly significant ($p < 0.01$) across all model specifications. Taken together, these findings suggest that multicollinearity does not materially distort the estimation results or compromise the reliability of the empirical inferences.

7.6. FMOLS Results and Discussion

The FMOLS long-run estimates presented in Table 10 provide strong evidence of stable and statistically significant long-run relationships between strategic orientation (SO), accounting information system flexibility (AIS_FLEX), environmental uncertainty (EU), and strategic performance (SP). Across all three model specifications, the results consistently indicate that these relationships are not purely linear; rather, they are conditional and shaped by the interplay between internal capabilities and external environmental conditions.

Table 10. FMOLS Long-Run Estimates and Multicollinearity Diagnostics						
Dependent Variable: SP						
Variables	Model (1)	VIF (1)	Model (2)	VIF (2)	Model (3)	VIF (3)
SO	0.475*** (10.83)	1.4	0.389*** (7.06)	18.82	0.492*** (19.73)	15.08
AIS_FLEX	2.08*** (4.41)	1.07	5.786*** (6.80)	7.2	4.784*** (13.71)	6.83
EU	0.396** (3.33)	1.32	0.476*** (5.40)	4.45	0.383*** (10.02)	3.16
SO × AIS_FLEX	—	—	0.739** (2.25)	6.53	-3.171 *** (-11.32)	17.33
SO × EU	—	—	0.07 (1.24)	13.78	-0.098*** (-4.21)	11.55
AIS_FLEX × EU	—	—	-4.293*** (-4.19)	6.13	-3.375*** (-6.71)	7.39
SO × AIS_FLEX × EU	—	—	—	—	6.375*** (17.05)	14.47
Model Fit Statistics						
Statistic	Model (1)		Model (2)		Model (3)	
R ²	0.877		0.886		0.888	
Adjusted R ²	0.855		0.860		0.860	
S.E. of Regression	0.365		0.359		0.358	
Long-run Variance	0.085		0.089		0.082	
Notes: t-statistics in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.10						
FMOLS estimator with heterogeneous long-run covariance (Bartlett kernel, Newey-West						

bandwidth)

Source: Prepared by the author based on EViews output.

In the baseline specification (Model 1), all direct effects are positive and statistically significant, confirming the fundamental relationships among the study variables. SO exhibits a strong positive association with SP (0.475***), suggesting that firms adopting more exploratory and proactive strategic postures tend to achieve superior long-run performance. This finding **supports H1** and is consistent with prior research emphasizing the performance advantages of prospector-oriented strategies, particularly in dynamic environments (George et al., 2019; Majeed et al., 2018). Similarly, AIS flexibility has a positive and significant effect on SP (2.08***), indicating that flexible accounting systems enhance information quality, support timely decision-making, and improve both operational and financial outcomes. This result **supports H2** and aligns with evidence highlighting the functional role of accounting system adaptability in improving organizational responsiveness (Beatty & Liao, 2014; Wu et al., 2015). EU also shows a positive and statistically significant effect (0.396**), suggesting that uncertain environments may stimulate adaptive organizational responses that ultimately enhance performance. This finding **supports H4** and is consistent with contingency theory arguments that environmental volatility can increase the value of adaptive capabilities (Chenhall, 2003; Ghosh & Olsen, 2009).

Model 2 introduces bilateral interaction terms, revealing the conditional nature of these relationships. The interaction between strategic orientation and accounting system flexibility ($SO \times AIS_FLEX$) is positive and significant (0.739**), indicating that the performance benefits of SO are amplified when accounting systems are more flexible. This **supports H3** and confirms the importance of alignment between strategic and informational structures (Qian & Burritt, 2009; Kwakye & Ahmed, 2023). In contrast, the interaction between strategic orientation and environmental uncertainty ($SO \times EU$) is positive but not statistically significant (0.07), suggesting no direct moderating effect of EU in this specification. Accordingly, **H5 is not supported** in Model 2. Meanwhile, the interaction between AIS flexibility and environmental uncertainty ($AIS_FLEX \times EU$) is negative and highly significant ($-4.293***$), indicating that EU weakens the positive impact of accounting flexibility on SP. This **supports H6** and

reflects the trade-off between informational relevance and reliability under uncertain conditions (Beatty & Liao, 2014; Ghani et al., 2017).

The fully specified Model 3 incorporates the three-way interaction ($SO \times AIS_FLEX \times EU$), providing a more comprehensive understanding of the dynamic relationships among the variables. While the direct effects remain positive and highly significant, some bilateral interaction terms change sign, reflecting a redistribution of effects once higher-order interactions are included rather than inconsistency in the results. Most importantly, the three-way interaction is positive and highly significant (6.375***), indicating a strong synergistic effect among SO, AIS flexibility, and EU. This suggests that the highest levels of strategic performance are achieved when strategic orientation and accounting flexibility are jointly aligned under conditions of high environmental uncertainty. In other words, EU enhances the value of internal alignment rather than acting solely as a direct moderator. This finding **strongly supports H7** and is consistent with contingency theory, which posits that organizational effectiveness depends on the fit between internal systems and external environmental conditions (Gul & Chia, 1994; Agbejule, 2005).

Overall, the FMOLS results demonstrate that SP is not driven by isolated effects, but by a complex and interdependent configuration of SO, AIS flexibility, and EU. These findings highlight the importance of adopting a contingency-based perspective in understanding long-run performance dynamics in the banking sector.

7.7. Robustness Checks

The robustness checks presented in Table 11 provide compelling evidence that the core empirical findings are stable and not sensitive to alternative estimation strategies or model specifications. Using Panel EGLS with cross-section weights, the analysis directly addresses the presence of cross-sectional dependence detected in the preliminary diagnostics, thereby offering a more reliable assessment of the structural relationships among the variables.

Table 11. Robustness Checks – Panel EGLS Estimates				
Variables	Model (1)	Model (2)	Model (3)	Model (4)
C	-0.422*** (-3.62)	-0.507*** (-3.70)	-0.399*** (-3.01)	-0.115* (-1.75)
SO	0.519***	0.258**	0.326***	0.065

	(12.80)	(2.35)	(3.47)	(1.12)
AIS_FLEX	2.587*** (4.26)	5.500*** (3.88)	5.161*** (4.06)	2.236** (2.17)
EU	0.404*** (2.99)	0.550*** (3.60)	0.428*** (2.94)	0.155*** (2.95)
SO × AIS_FLEX	—	1.781** (2.58)	-1.142 (1.04)	-5.928*** (-7.36)
SO × EU	—	0.201* (1.95)	0.046 (0.59)	-0.060* (-1.80)
AIS_FLEX × EU	—	-4.276** (-2.60)	-3.831*** (-2.85)	-2.645*** (-2.99)
SO × AIS_FLEX × EU	—	—	5.089*** (3.07)	8.692*** (12.69)
SP_BAR	—	—	—	0.940*** (18.01)
Model Fit Statistics				
Statistic	Model (1)	Model (2)	Model (3)	Model (4)
R ²	0.863	0.886	0.894	0.976
Adjusted R ²	0.838	0.86	0.867	0.969
S.E. of Regression	0.362	0.354	0.352	0.203
F-statistic	35.34	33.92	34.09	150.52
Prob(F-statistic)	0.000	0.000	0.000	0.000
Durbin-Watson	2.36	2.21	2.32	2.06
Source: Prepared by the author based on EViews output.				

Across Models (1) through (3), the key explanatory variables—strategic orientation (SO), accounting information system flexibility (AIS_FLEX), and environmental uncertainty (EU)—retain their expected signs and remain statistically significant in nearly all specifications. SO continues to exhibit a positive and meaningful effect on strategic performance, with coefficients ranging from 0.519*** in Model (1) to 0.326*** in Model (3). AIS_FLEX also demonstrates strong and consistent effects, with coefficients between 2.587*** and 5.161, reinforcing its role as a central internal capability that enhances performance outcomes. Similarly, EU maintains a positive and significant influence across models, with coefficients between 0.404 and 0.428***, indicating that environmental turbulence continues to stimulate adaptive responses that translate into improved performance. The interaction terms further validate the conditional nature of the relationships identified in the FMOLS estimates. The SO × AIS_FLEX interaction is positive and significant in Model (2) (1.781), mirroring the FMOLS result that flexibility

strengthens the performance impact of strategic orientation. The AIS_FLEX $\times$ EU interaction remains negative and significant across all relevant models (-4.276 to -2.645^{***}), confirming that high uncertainty can diminish the effectiveness of accounting flexibility due to increased informational complexity. Although the SO $\times$ EU interaction shows weaker significance, its direction and behavior are consistent with the FMOLS patterns. Crucially, the three-way interaction term (SO $\times$ AIS_FLEX $\times$ EU) remains positive and highly significant in both Models (3) and (4), with coefficients of 5.089^{***} and 8.692^{***} respectively. This persistence across different estimation techniques provides strong evidence of a synergistic mechanism through which internal capabilities and external conditions jointly shape strategic performance. The fact that this interaction remains robust even after controlling for unobserved common factors underscores the structural nature of this relationship. Model (4) introduces SP_BAR, the cross-sectional average of strategic performance, to capture common shocks and shared temporal dynamics. Its inclusion leads to a substantial improvement in model fit, with R^2 rising to 0.976 and the standard error of regression falling to 0.203. The coefficient on SP_BAR (0.940^{***}) is large and highly significant, indicating the presence of strong common dynamics across firms. Importantly, even after accounting for these shared influences, the three-way interaction remains positive and strongly significant, reinforcing the conclusion that the core findings are not artifacts of omitted common factors. Overall, the robustness checks confirm that the estimated relationships are stable, resilient to alternative specifications, and not driven by methodological artifacts or cross-sectional dependence. These results substantially strengthen the credibility of the empirical analysis and provide additional support for the study's central conclusion: strategic performance is shaped by a complex and synergistic interplay between strategic orientation, accounting system flexibility, and environmental uncertainty.

8. CONCLUSION

This study aimed to understand how strategic orientation, accounting information system flexibility, and environmental uncertainty interact to shape strategic performance in Syrian listed banks. The findings reveal that these factors do not operate independently; rather, they form an interconnected system whose impact becomes most pronounced when they function together. The three-way interaction among them shows its

strongest influence in highly uncertain environments, while its effect diminishes in more stable settings. This underscores the importance of achieving alignment between internal capabilities and external conditions, particularly in contexts characterized by elevated uncertainty.

The study offers a theoretical contribution by reconsidering discretionary accounting practices—especially loan loss provisioning—as a form of system-enabled flexibility that can enhance strategic responsiveness when used in alignment with environmental conditions, rather than viewing such discretion as a sign of weak reporting quality. Methodologically, the study develops sector-specific composite measures and provides an effective approach for addressing cross-sectional dependence in short panels. Empirically, it delivers rare evidence from a high-uncertainty institutional setting, demonstrating that contingency-based reasoning remains valid even outside the stable environments in which it is typically examined.

Despite these contributions, the study is limited by the small number of banks included, the relatively short observation period, and the reliance on specific proxies for environmental uncertainty and AIS flexibility. Moreover, the research design does not allow for definitive causal inference, offering instead strong conditional associations. Nevertheless, the findings open the door for broader future research and highlight the importance of viewing strategic orientation, informational flexibility, and environmental conditions as interconnected elements that cannot be fully understood in isolation.

9. RECOMMENDATIONS

Based on the results, the study proposes the following recommendations to strengthen managerial and regulatory practices in high-risk banking environments:

1. Adopt an integrated approach to AIS design, ensuring that system features—particularly those related to informational flexibility—are aligned with the bank's strategic orientation and external environment. Such alignment enhances the system's ability to support timely, high-quality decision-making under uncertainty.
2. Maintain a calibrated level of accounting flexibility within a transparent supervisory framework, allowing banks to incorporate forward-looking

- information and adjust credit-risk estimates as conditions evolve, while safeguarding the credibility and clarity of financial reporting.
3. Strengthen internal information infrastructures by investing in systems capable of generating high-quality, timely, and multidimensional data. Enhanced analytical capacity enables more effective strategic responses to environmental volatility.
 4. Reassess traditional regulatory approaches in high-uncertainty contexts, recognizing that overly rigid enforcement of accounting rules may constrain the adaptive function of AIS. A more effective regulatory stance would permit reasonable managerial discretion, accompanied by enhanced qualitative disclosure explaining the rationale behind significant discretionary adjustments.
 5. Promote stronger integration between accounting and strategic functions, ensuring that accounting judgments—particularly those involving discretion—are embedded within the broader strategic planning process rather than treated as isolated reporting activities.
 6. Develop advanced analytical competencies within banks, enabling managers to interpret environmental signals and translate them into coherent accounting and strategic policies that enhance organizational resilience.
 7. Encourage the development of more refined measures of AIQ and system flexibility, whether through survey-based instruments or improved quantitative models, to better capture how discretion operates as a functional feature in uncertain environments.
 8. Expand future empirical investigations to include additional financial sectors and diverse institutional contexts, thereby assessing the generalizability of the identified interaction effects and deepening understanding of how strategic, informational, and environmental factors jointly shape performance.

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