# Impact of Organisational Culture, Enterprise Risk Management, and Risk Governance Capabilities on Business Value: The Evidence of Vietnam's Joint-Stock Commercial Banks

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Every entity exists to provide value for its stakeholders and faces risk in pursuing value. Risk affects a business's ability to achieve its strategy, objectives, and business value. An effective enterprise risk management (ERM) helps entities control their risks. Management optimises outcomes to enhance capabilities to create, preserve, and realise value. "ERM is the culture, capabilities, and practices integrated with strategy-setting and performance that organisations rely on to manage risk and create value" (COSO, 2017). The objective of this study is to assess the impact of organisational culture (ORC), ERM, and risk governance capabilities (RGC) on business value (BVA). Data were collected using a survey questionnaire. The respondents are managers and employees working in Vietnam's joint-stock commercial banks (JSCB). PLS-SEM is employed with SmartPLS software. The research results show that ORC, RGC, and ERM directly and indirectly impact BVA. The study suggests practical implications for Vietnamese JSCB in improving the value of the bank's stakeholders.

Keywords: enterprise risk management, risk management capabilities, organisational culture, business value

#### INTRODUCTION

In a broad sense, BVA refers to the overall worth or benefit that a business generates for its stakeholders. BVA can be tangible and intangible. It encompasses financial performance, customer satisfaction, employee morale, and societal impact, considering economic and noneconomic outcomes that affect various stakeholders. BVA is not just about the present but also about the potential for future growth, innovation, and sustainability. In economics, economic value is subjective and difficult to measure. The economic value of a business is the business's contribution to the global gross domestic product (GDP). In the social view, BVA is business ethical conduct, employee well-being, customer satisfaction, social responsibility, and community engagement. From an environmental view, BVA recognises the significance of a company's impact on the natural environment. It incorporates resource conservation, pollution reduction, and climate change mitigation. BVA is a critical concept underpinning any organisation's success and sustainability. It encompasses a business's overall worth and contribution to its stakeholders, including

shareholders, customers, employees, the community, and government. It is an important feature of firms' institutional and competitive environments because it reduces stakeholder uncertainty when exchanging the resources they control.

However, research on the value of business and business value creation (BVC) is mainly about the financial aspect (Brigham, 2015; Imeokparia, 2013). Research on the social aspect with approaches to stakeholders is still minimal. In addition, research on the sources of creating BVA, such as culture, capabilities, and risk management (RIM) practices to enhance an organisation's ability to create, preserve, and realise value, has not been adequately considered. Moreover, researchers investigating ERM's ability to create value face limitations in producing generalised research findings. The limitation leads to mixed findings on the value-creation ability of ERM (McShan et al., 2011). Hoyt and Liebenberg (2011) conclude that ERM enhances the business's value, but Pagach and Warr (2011) find limited evidence that adopting ERM results in significant changes to key financial variables.

Practically, JSCB has not yet built a comprehensive and integrated RIM framework, and the BOD has not clearly stated RIM policies regarding risk appetite. Bank's RGC is still limited, and investment in information technology infrastructure to support risk management has not been focused. The limitations mentioned above guide this research.

### LITERATURE REVIEW

#### **Business Value**

The value may have different meanings in different contexts and to different stakeholders in terms of intrinsic and extrinsic value. Value is defined by customers, investors, employees, suppliers, and other stakeholders. Each recipient will understand what constitutes value differently since different individuals have different needs and values (Breuer & Lüdeke-Freund, 2018). There are economic, financial, social, and environmental views on the value of the business. In economics, economic value (ECV) is the value that a person places on a good or service based on the benefit they get from it. It is often estimated based on the person's willingness to pay for the good. ECV is subjective and difficult to measure. The ECV of a business is the business's contribution to the global gross domestic product (GDP). In finance, however, the value of a firm is directly related to the firm's financing, investment, and dividend decisions. It can be determined through financial measures based on the firm's assets and ability to generate returns. In the social view (SOV), BVA is business ethical conduct, employee well-being, customer satisfaction, social responsibility, and community engagement. Finally, from an environmental view (ENV), BVA recognises the significance of a company's impact on the natural environment. It incorporates resource conservation, pollution reduction, and climate change mitigation. The environmental aspects of BVA are resource efficiency, pollution reduction, climate change mitigation, waste reduction, and sustainable sourcing.

In the theory of the firm, value is a surplus or gain in someone's welfare relative to a previous condition. Such value might be reflected in increased cash flow, income, wealth, or welfare. In stakeholder theory, value is defined as the recipient stakeholder (Schneider & Sachs, 2017). From a resource-based perspective, businesses more narrowly define value as an attribute of firm resources necessary to achieve competitive advantages and meet business needs (Barney, 1991). In management, BVA is an informal term that includes all forms of value that determine the health and well-being of the firm in the long run. One theory, emphasised in strategic management literature, focuses on the increase in producer surplus on the owners' behalf—this is the foundation for shareholder wealth in a publicly traded corporation (McWilliams & Siegel, 2011). At the core of stakeholder literature, the other theory emphasises increased surpluses for multiple stakeholders (Crane et al., 2015). Those decisions in ERM can determine whether value is created, preserved, eroded, or realised (COSO, 2017).

#### Value Creation

Value is created when the benefits derived from resources deployed exceed the cost of those resources (COSO, 2017). It is essential for a profitable and lasting business. VCR is an essential process in business management. Value is created through an organisation's business model, which takes inputs from the capital and transforms them through business activities and interactions to produce outputs and outcomes that, over the short, medium and long term, create or destroy value for the organisation, its stakeholders, society and the environment" (IIRC, 2013). One theory, emphasised in strategic management literature, focuses on the increase in producer surplus (McWilliams & Siegel, 2011). At the core of stakeholder literature, the theory emphasises increased surpluses for multiple stakeholders (Crane et al., 2015). Lam (2003) argues that ERM implementation adds value by reducing potential losses, earnings and stock price volatility and improving the return on capital. Therefore, the hypothesis is formulated as:

*H0-1:* VCR is positively associated with BVA.

#### Value Preservation

If value creation is primarily concerned with delivering a potential upside, value preservation (VPR) protects against a potential downside. The VPR imperative represents an organisation's obligation to stakeholders to take adequate steps to preserve value. Value is preserved when the value of resources deployed in day-to-day operations sustain created benefits. It represents the measures an organisation takes to defend itself and the interests of its stakeholders from a multitude of potential hazards, the occurrence of which could be detrimental to the achievement of the organisation's objectives (COSO, 2017). VPR is not a static concept but a dynamic process that intertwines with value creation. In order to help preserve value, organisations are now expected to take steps to protect stakeholder value, and the protection of stakeholder value is synonymous with corporate defence-related practices such as corporate governance (CGO), risk management, and compliance activities (Lyons, 2017). Therefore, the hypothesis is formulated as follows:

H0-2: VPR is positively associated with BVA.

#### **Value Erosion**

In business, organisations are constantly faced with the threat of value reduction. Organisations need to be wary that value can decline in several ways, ranging from its sudden depletion due to an unexpected liability, its gradual erosion over time due to an outdated or inflexible business model, or its destruction due to flawed strategic assumptions. Without taking adequate steps to help preserve value, stakeholders of the organisation may find their value being eroded, and the organisation may find its value declining yearly. Value erosion (VER) refers to the gradual decline in a company's value over time due to increased competition, changing market conditions, or internal mismanagement. VER occurs due to changes in customer preferences, technology, regulations, competitor activity, and economic conditions (Kashyap et al., 2017). Sustainability-focused firms are more likely to withstand value erosion (Neilson, 2009). Therefore, the hypothesis is formulated as:

H0-3: VER is negatively associated with BVA.

## Value Realisation

Business value realisation (VRL) is about achieving and demonstrating the business value resulting from deploying a new or improved product, solution or service. VRL is an effort that creates a quantifiable benefit that accrues to a stakeholder. VRL would create greater efficiency, leading to a noticeable improvement in profitability for the whole company. VRL involves putting the appropriate set of activities required to help ensure the expected value delivery. Hence, realising value is a critical element of any successful corporate strategy. From a shareholder perspective, value may be realised through annual dividend income, an attractive sale, or other liquidity event that can transform equity into cash or other valuable liquid assets. Other stakeholders may realise value in nonfinancial ways, such as through corporate social responsibility (CSR) and environmental initiatives. Over time, the organisation's capacity to realise sustainable value for its stakeholders is a function of its ability to create and preserve value continuously. VRL tracks the quantified value a business or stakeholder receives from a solution implemented within the company. VRL provides a tangible way to track solutions' actual business impact on customers, business

operations, and stakeholder value. Value is realised when stakeholders derive benefits created by the entity (COSO, 2017). Therefore, the hypothesis is formulated as:

**H0-4:** VRL is significantly associated with BVA.

## **Enterprise Risk Management**

The definition of ERM depends on the concept of risk. Lam (2000) defines ERM as an integrated framework for credit RIM, market risk, operational risk, economic capital, and risk transfer to maximise business value. Makomaski (2008) states that ERM is "a decision-making principle that deals with change in business goals". With the application of ERM, businesses can identify all potential problems that may affect them and know their risk appetite and tolerance (Walker et al., 2003). According to ISO, risk is "The effect of uncertainty on objectives." ERM is "coordinated activities to direct and control an organisation about risk" (ISO 31000:2009, 2018). Meanwhile, COSO (2017) states that ERM is "the culture, capabilities, and practices integrated with strategy-setting and its performance that organisations rely on to manage risk in creating, preserving and realise value". Thus, COSO's ERM concept emphasises the business's strategy and goals and is closely related to value. Previously, with a "silo" approach, RIM was not integrated with strategic planning and performance. ERM is an approach with effective RIM practices and processes (Yazid et al., 2012). This study accepts the view of COSO's ERM as articulated in "Enterprise Risk Management-Integrating with Strategy and Performance" (COSO, 2017), which includes the following 5 elements:

#### **Governance and Culture**

Governance and culture (GNC) form a basis for all other components of ERM. Generally, management refers to distributing roles, authorities, and responsibilities among stakeholders, the BOD, and management. The governance sets the tone for the organisation and establishes oversight responsibilities. Governance sets the entity's tone, reinforcing the importance of ERM and establishing oversight responsibilities. Culture is reflected in decision-making. Culture is the attitude, behaviour, and understanding of risk that influences management and staff decisions and reflects the organisation's vision, mission, and core values. Governance sets the organisation's tone, reinforces its importance, and establishes oversight responsibility for ERM. Culture is associated with ethical values, desired behaviours, and understanding organisational risk. Therefore, the hypothesis is formulated as follows:

*H1-1: GNC* is significantly associated with ERM.

# Strategy and Objective-Setting

ERM is integrated into the entity's strategic plan by setting strategy and business objectives. An organisation sets its risk appetite (RAP) with a strategy setting. Strategy planning, ERM, and strategic and goal setting act together. An RAP is determined to be in line with the strategy, ERM, strategy, and goal setting (SOS) work together in strategic planning. RAP is established and aligned with strategy; business goals put the strategy into practice and serve as a basis for identifying, assessing, and responding to risks. Therefore, the hypothesis is formulated as follows:

*H1-2:* SOS is significantly associated with ERM.

#### Performance

An organisation identifies and assesses risks that may affect an entity's ability to achieve its strategy and business objectives. It prioritises risks according to their severity and considers the entity's RAP. The organisation then selects risk responses and monitors performance (PRF) for change. This way, it develops a portfolio view of the risk in pursuing its strategy and entity-level business objectives. It will then select risk responses and review the portfolio to determine the level of risk it has taken. Therefore, the hypothesis is formulated as follows:

## *H1-3:* PRF is significantly associated with ERM.

## Review and Revision (RNR)

By reviewing ERM capabilities and practices and the entity's performance relative to its targets, an organisation can consider how well the ERM capabilities and practices have increased value over time and will continue to drive value in light of substantial changes. By reviewing the entity's performance, the organisation can consider how well the ERM components perform over time and in the context of significant changes and revisions. Therefore, the hypothesis is formulated as follows:

## H1-4: RNR are significantly associated with ERM.

## Information, Communication, and Reporting (ICR)

The organisation uses information systems to retain, process, and manage information and data. The organisation reports on culture, risk, and performance using the information on all components. Communication is the continual, iterative process of obtaining and sharing information throughout the entity. ERM requires continuous collection and sharing of information from internal and external sources. Therefore, the hypothesis is formulated as follows:

## *H1-5: ICR* is significantly associated with ERM.

### **Organisational Culture**

ORC is a set of core values, assumptions, understandings, and norms shared by members of an organisation (Daft, 2012). According to COSO (2017), ERM is the culture that organisations rely on to manage risk in creating, preserving, and realising value. Furthermore, human and cultural factors are core RIM principles for VCR and protection (ISO, 2018). This study emphasises ORC as a crucial antecedent of ERM practices. Theoretically, several organisational factors are depending on internal and external focus. In this study, the authors concentrate on clan and hierarchical types of ORC. The clan culture is a term used to describe a type of ORC typically found in small, medium-sized, or family-owned businesses. It is characterised by a great emphasis on trust, loyalty, tradition, heritage and a sense of employee familial relations. Hierarchical ORC is characterised by formalised and structured procedures governing employees' actions (Hartnell et al., 2019). It emphasises the importance of ensuring consistency, predictability, and effectiveness through a structured chain of command (Lee & Edmondson, 2017). In such cultures, management often places a high value on status and position, where using power and authority, control is exerted (Summereder et al., 2014). Owing to this, most important decisions are made by people who are at the managerial level. Employees are typically discouraged from voicing their opinions or offering perspectives that differ from those of management (Moonen, 2017). The emphasis on order and stability ensures smooth operations and overall organisational effectiveness. In this study, the authors consider the following dimensions of organisational culture: Involvement (INV) (Denison, 1990), Organisational structure (STR) (Hartnell et al., 2019), Teamwork (TWK) (Deninson & Misha, 1995), Process orientation (PRO) (Benraad et al., 2022), Openness (Kluckhohn & Strodtbeck, 1961); Commitment (CMM) (Arbabisarjou & Fazizollah, 2016), Control (CTR) (Summereder et al., 2014), Collaboration (COL) (Nwugwo, 2001), Integration (ITG) (Al-Hajjim & Al-Salman, 2021).

#### Involvement

INB is related to how an employee can identify his work, participate actively in it, and consider his performance important to him (Robbins & Coulter, 2016). The research results of Taştan and Türker (2014) showed that ORC influences job involvement (JIN). The research literature has shown that effective organisations empower and engage their people, build their organisations around teams, and develop human capability at all levels (Buckingham & Coffman, 1999). Therefore, the hypothesis is formulated as follows:

### *H2-1: INV* is significantly associated with ORC.

#### Structure

STR is an extrinsic factor that influences people's behaviour from the outside through formal limitations set by division of labour, authority distribution, grouping of units, and coordination. As a particular configuration of structural dimensions, STR models direct and shape how organisation members perform their tasks while achieving their goals. In different organisational models, the organisation's members make decisions, take action, and interact with the organisation in entirely different ways. Thus, it can be assumed that the STR model influences ORC. Therefore, the hypothesis is formulated as follows:

### *H2-2:* STR is significantly associated with ORC.

#### Commitment

Team members are committed to the team and its goals, not just their own. Team members can commit to shared decisions for the organisation's greater good. CMM does not require that everyone agrees with the direction or a decision. However, it does require that they have the opportunity to have their ideas heard. The study by Arbabisarjou and Fazizollah (2016) showed a significant relationship between ORC and organisational commitment (OCO). Therefore, the hypothesis is formulated as follows:

## *H2-3:* CMM is significantly associated with ORC.

#### **Teamwork**

TWK is highly valued in clan cultures. It is essential to achieve the objectives of an organisation, and generating spaces to convey ideas and thoughts strengthens the sense of people's belonging, which leads to the inference that the core of any organisation is based on the collective behaviour of its members, which are governed by the ORC (Pandey & Deepti, 2022). Employees who work in teams with solid interpersonal connections are more likely to produce excellent work and cope better in stressful situations. Therefore, the hypothesis is formulated as follows:

### *H2-4: TWK* is significantly associated with ORC.

#### Collaboration

COL is a work atmosphere that maximises employees' distinct skill sets and competencies through TWK. The COL culture fosters a friendly environment where employees can bond and feel comfortable with each other. When employees affect a team's decision-making, it inspires positive COL. A COL culture fuels innovation by bringing out the best in employees. COL creates feelings of community and involvement. Nwugwo (2001) wrote that COL characterises the culture. Therefore, the hypothesis is formulated as follows:

## *H2-5:* COL is significantly associated with ORC.

## Control

Knights and Willmott (2012) suggest that one outcome of management's preoccupation with the concept of culture might be as a means of controlling employees. Cultural control is one form of management control. The mechanisms of control in some organisations have moved from bureaucratic to cultural techniques. Control systems can be viewed as part of the sociocultural system and will both reflect and be a part of the organisational culture. Peters and Waterman (1982) and Deal and Kennedy (1982) view culture as a management control tool. Therefore, the hypothesis is formulated as follows:

## **H2-6:** CTR is significantly associated with ORC.

## Integration

ITG is the degree to which various subunits within the organisation are actively encouraged to operate in a coordinated way by cooperating effectively towards achieving overall organisational objectives (Van Der Post et al., 1998). Different functions and units of the organisation can work together well to achieve common goals. Organisational boundaries do not interfere with getting work done. Integration is acquiring, absorbing, and developing new resources, such as acquisitions or alliances, to gain access to technology for creating new organisational procedures or patterns of practices (Wall et al., 2010). Al-Hajjim and Al-Salman (2021) defined integration capabilities as the efficiency an organisation possesses to acquire available resources, combine them, and then deploy them to achieve its management visions. It also involves linking new capabilities with existing organisational resources and capacities. Therefore, the hypothesis is formulated as follows:

## H2-7: ITG is significantly associated with ORC.

#### **Process Orientation**

PRO is a business management approach focusing on business processes. This approach focuses on the process as the centre point of the company. The goal is to make processes more efficient, increasing the company's productivity and profitability. Process-oriented organisations define goals, measure and monitor results and adapt to changes. A process-oriented organisation can increase efficiency and productivity and enhance the competitive advantage (CAD) (Tarhan et al., 2015). With more process-efficient organisation, companies have created more capacity for innovation and expansion, ultimately benefiting the company's growth. A process-oriented strategy involves developing a system of clearly defined and aligned processes to achieve a specific business goal. The system includes core processes, management processes, support processes, inputs, outputs, knowledge capture, knowledge feedback, resources, controls, information and communication flows. Thus, the organisation should be seen as a system of processes that satisfy owner, personnel and customer demands and needs. The following results may be achieved through a process orientation: (i) organisational engagement, (ii) organisation management, (iii) customer focus and value focus, (iv) process transparency, (v) process integration, and (vi) process efficiency (Nilsson, 1998; Lindfors, 2001). Creating a process-oriented culture requires a clear vision, strong leadership, effective communication, and continuous improvement. Benraad et al. (2022) consider business process management a supportive culture. In addition, Flamholtz and Randle (2011) consider process orientation a dimension of the ORC. From there, the hypothesis is stated as follows:

#### *H2-8:* PRO is positively associated with ORC.

## **Risk Governance Capabilities**

Ingham (2017) states that organisational capability (OCA) focuses on human, social, and organisational capital. Risk governance capability (RGC) includes risk systems, processes, information, tools, and people's capabilities. Capability and culture are hugely connected; when OCA changes, ORC will change. ERM integrates RIM and COG (Lundqvist & Wilhelmsson, 2018). A crucial component of ERM is risk governance (RIG) (COSO, 2017). RIG provides greater awareness of ERM (Mohd-Sanusi, 2017). Capabilities constitute the framework in which assets enriched by skills can be exploited to develop and implement successful risk governance policies.

#### Governance

Governance forms the broadest concept. Typically, this refers to allocating roles, authorities, and responsibilities among stakeholders, the board, and management (COSO, 2017). Some aspects of governance fall outside ERM. Governance describes structures and processes for collective decision-making involving governmental and non-governmental actors (Nye & Donahue, 2000). Risk governance (RGV) includes actors, rules, conventions, processes, and mechanisms for collecting, analysing and communicating relevant risk information and management decisions. Encompassing the combined risk-

relevant decisions and actions of both governmental and private actors, RGV is of particular importance in, but not restricted to, situations where there is no single authority to take a binding RIM decision but where, instead, the nature of the risk requires the collaboration of, and coordination between, a range of different stakeholders. RGV applies the principles of good governance to the identification, assessment, management and communication of risks. Therefore, the hypothesis is formulated as follows:

## *H3-1:* GOV positively impacts RGC.

### Systems, processes, and tools (SPT)

Risk systems provide an entity's first and second line of assurance against the threats and pressures they face within their operating context. The RIM process is a framework for the actions that must be taken. This process involves identifying, monitoring, and controlling potential risks that might threaten an organisation's achieving their objectives. Risk tools assist staff in making consistent judgements on risk across the entity. Australian Governance states that systems, processes, and tools influence risk governance capabilities (ACSI, 2017). Therefore, the hypothesis is formulated as follows:

## H3-2: SPT positively impact RGC.

## Knowledge

KNL is information with a process applied to add value. KNL is an awareness of facts, a familiarity with individuals and situations, or a practical skill. It often involves possessing information learned through experience. Noble et al. (2013) confirmed that risk managers should have the knowledge and skills to measure and evaluate risks effectively. Chileshe and Yirenkyi-Fianko (2012) also asserted that KNL enhances collaboration between risk managers and team members, improving organisational performance. Bosua and Venkitachalam (2013) supported the significance of knowledge in private firms in developed countries. Therefore, the hypothesis is developed as follows:

## *H3-3:* KNL positively impacts RGC.

## Information Technology Infrastructure (INF)

Risk systems and tools – Ranging in complexity, risk systems and tools are designed to provide storage and accessibility of risk information that will complement the RIM process. The complexity of risk systems and tools often ranges from simple spreadsheets to complex RIM software, and they are most effective when they are appropriate and adaptive to the entity's needs. The availability of data for analytics and monitoring, risk registers and profiles, and dashboards and reporting will assist in building risk capability, provided the systems and tools are well maintained, information is rich and up to date and training and support is provided. According to Hasanali (2002), information technology (INT) infrastructure is one of the critical success factors in RIM. Thus, there is a positive relationship between using IT and accelerating digital transformation to enhance the effectiveness of risk management in companies (Kwaik et al., 2023). IT can affect RIM (Akatov et al., 2019; Samimi, 2020; Kwaik et al., 2023). Therefore, the hypothesis is developed as follows:

# H3-4: INF positively affects RGC.

# People Capability

People capability (PCA) – a consistent and effective RIM approach resulting from well-skilled, trained, and adequately resourced staff. Cardy and Selvarajan (2006) stated that there is currently a great interest in human resource efficiency and its role in RIM implementation. The competencies of boards of directors considerably influence the ERM (Ahmed & Manab, 2016). The competence of the chief risk officer (CRO), risk committee (RCO), audit committee (AC), internal audit, and financial expertise on the board has a significant positive influence on ERM (Wan-Mohammad et al., 2016). According to the Global Forum for

Food and Agriculture (AG) (2016), people's capabilities positively influence RGC. Therefore, the following hypothesis is formulated:

*H3-5:* PCA positively impact RGC.

## Relationship between ERM and BVA

A study by Mohammadi and Makui (2017) showed a strong relationship between ERM and the value of a company. Barclay (2013) also supports the idea that ERM positively impacts BVA. However, some critiques are against the results of the positive significance relationship between ERM and the firm's value. Augustina and Baroroh (2016) argued that implementing ERM is only restricted to fulfilling the requirements of listed firms in developed countries; therefore, no significant relationship influences the firm value. There is a need to re-assess this relationship. From there, the hypothesis is stated as follows:

**H1:** ERM positively impacts the BVA.

## Relationship between ORC and BVA

A study by Kazazi et al. (2009) showed a significant relationship between ORC and organisational success. According to Graham et al. (2019), ORC drives business value. However, Hartnell et al. (2011) conclude that a comprehensive and compelling theory on linking ORC with financial performance is lacking. Meanwhile, Sørensen (2002) suggests that the relationship is not straightforward and advocates the possibility of contingent on exogenous conditions. This study will test the relationship between ORC and BVC. Therefore, the hypothesis is stated as follows:

**H2:** ORC positively impacts the BVA.

## Relationship between RGC and BVA

Effective RGC will be better prepared to control endogenous and exogenous risks and minimise operational inefficiencies and business costs (Song et al., 2019). The firm's effective RGC will ensure responsiveness to changing market dynamics (Andersen, 2008). There is general agreement among researchers that RIM adds value to the firm corporate standing (Bromiley et al., 2015). The study by Khan et al. (2019) also showed that a firm's RGC will improve the firm's performance and reduce costs. Therefore, the hypothesis is stated as follows:

*H3:* RGC positively impacts the BVA.

## Relationship between ORC and ERM

Research by Togok (2016) showed a significant relationship between culture and the effectiveness of an organisation's ERM. In addition, the study of Mulalidhar (2010) found that ORC is one of the challenges to implementing ERM. COSO's 2017 ERM Framework highlights culture as one of five core components for effective ERM. From there, the research hypothesis is formulated as follows:

*H4:* ORC positively impacts the ERM.

#### Relationship between RGC and ERM

COG is a framework of internal and external mechanisms, rules, processes and practices that help prevent and mitigate risks. Capabilities and knowledge give staff power, influencing the organisation's capacity to compete and complete tasks (Pfeffer & Lammerding, 1981). Management skills and knowledge positively relate to effective ERM practices (Bromiley et al., 2015). From there, the research hypothesis is formulated as follows:

**H5:** RGC positively impacts ERM.

## Relationship between ORC and RGC

Resource-based theory is a foundation for better understanding the interrelationships between ORC and RGC. The study by Hock et al. (2016) showed the impact of ORC on a firm's capability to innovate the business model. According to Cox and Xu (2023), ORC is one of the essential prerequisite antecedents to the organisational RGC framework. Menghwar and Daood (2021) also demonstrate the role of ORC in developing RGC. Therefore, the hypothesis is formulated as follows:

**H6:** ORC positively impacts RGC.

## Mediating Role of ERM in the Relationship between ORC and BVA

*H7:* ERM is mediating the relationship between RGS and BVA.

### Mediating Role of ERM in the Relationship between RGC and BVA

**H8:** ERM plays a mediating role in the relationship between RGC and BVA.

## Mediating Role of RGC in the Relationship between ORC and BVA

**H9:** RGC plays a mediating role in the relationship between ORC and BVA.

## Mediating Role of RGC in the Relationship between ORC and ERM

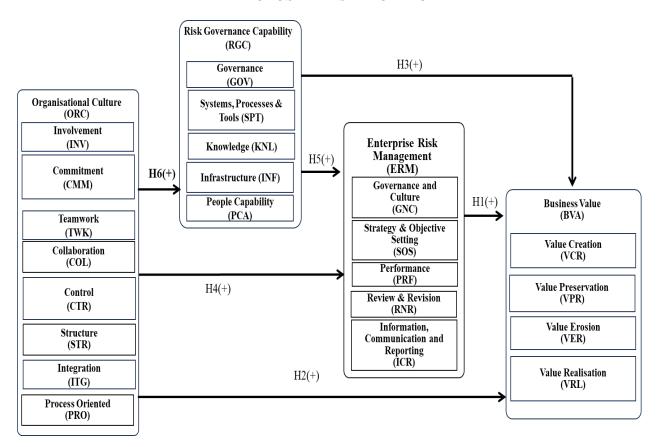
H10: RGC plays a mediating role in the relationship between ORC and ERM.

## Moderating Effect of Demographic Variables on the Path Coefficients

- *H11-1:* The sex moderates the path coefficients of the structural model.
- *H11-2:* The age moderates the path coefficients of the structural model.
- H11-3: The education level moderates the path coefficients of the structural model.
- H11-4: The work experience moderates the path coefficients of the structural model.
- *H11-5:* Working position moderates the path coefficients of the structural model.
- H11-6: The organisation level moderates the path coefficients of the structural model.
- H11-7: The bank's ownership moderates the path coefficients of the structural model.
- *H11-8:* The bank's size moderates the path coefficients of the structural model.

## PROPOSED RESEARCH MODEL

FIGURE 1
THE PROPOSED RESEARCH MODEL



## RESEARCH METHOD

# **Measurement Scales**

Based on the reviewed literature, the authors build scales to measure the influence of ORC, RGC, and ERM on the BVC, including 78 observed variables (see Table 1).

TABLE 1 MEASUREMENT SCALES

Variables	Encoded scales	Quantity of observables	References
Governance and Culture	GNC	5	COSO (2017)
Strategy and Objective Setting	SOS	4	COSO (2017)
Performance	PRF	5	COSO (2017)
Review and Revision	RNR	3	COSO (2017)
Information, Communication and	ICR	3	COSO (2017)
Reporting			
Involvement	INV	3	King & Grace (2010)
Commitment	CMM	4	Kwon et al. (2013)
Control	CTR	3	Togok et al. (2014)

Variables	Encoded scales	Quantity of observables	References
Teamwork	TWK	3	Denison et al. (2006)
Collaboration	COL	3	Mattessich et al. (2001)
Structure	STR	3	Erol and Ordu (2018)
Integration	ITG	3	Tseng & Lee (2012); ISO (2018);
Process Orientation	PRO	3	Chen et al. (2009)
Governance	GOV	3	Mang'unyi (2011); Yousef Aleisa (2017)
Systems, processes, and Tools	SPT	3	COSO (2017)
Knowledge	KNL	3	Bui Thanh Khoa and Tran Trong Huynh (2023); Biasutti and Heba (2012)
Information Technology Infrastructure	INF	3	Sezgin and Yildirim (2014)
People Capabilities	PCA	3	Denison et al. (2006)
Value Creation	VCR	3	Truworths International (2019)
Value Preservation	VPR	3	Rivera and Lallmahomed (2016); Haase et al. (2024)
Value Erosion	VER	3	Business Technology Standard (2024) FasterCapital (2024)
Value Realisation	VRL	3	Business Technology Standard (2024)

Source: Result of qualitative research

## **Focus Group Discussion**

To re-evaluate the proposed research model (see Figure 1) and the suitability of the scale with the research context, the method of interviewing experts using a structured questionnaire was implemented. Experts interviewed include 7 people knowledgeable about RIM in the banking sector, including members of the bank's management board, lecturers, and university researchers.

### **Sampling**

Sample size is determined with the unknown population size using the Cochran (1977) formula:

$$n = Z^2 p(1-p)/e^2$$
 (1)

Where:

"n" is the sample size to be determined.

"Z" is the value of looking up the Z distribution table based on the selected reliability (Typically, the 95% confidence interval used corresponds to Z = 1.96).

"p" is the success rate in the sample size estimation (usually chosen p = 0.5).

"e" is a permissible error, the most common being  $\pm 0.05$ .

Thus, n = 1.962 \* 0.5 \* (1 - 0.5)/(0.05\*0.05) = 384 observations.

However, to ensure high representativeness of the sample for the population, the authors project the sample size of this study to be 450 observations.

#### **Data Collection**

The research was conducted using a direct interview technique, using a questionnaire with a 5-level Likert scale sent to managers and staff working in ERM-related positions at their offices in CJSB in HCMC, Vietnam. The non-probability, purposive sampling combined with the snowball method was used. 650 sheets of questionnaires were distributed, 475 were collected, and 450 valid questionnaires were used. SmartPLS 4 software is used to process the data.

## RESULTS AND DISCUSSION

# **Descriptive Statistics**

TABLE 2
DESCRIPTIVE STATISTICS

Characteristics		Frequency	Rate (%)
Cov	Female	274	60.9
Sex	Male	176	39.1
	Under 25	72	16
	From 25 to 34	160	35.6
Age	From 35 to 44	146	32.4
	From 45 and over	72	16
	Undergraduate	108	24
Education	Graduate	253	56.2
	Postgraduate	89	19.8
	Under 5 years	95	21.1
XX1-1	From 5 to 14 years	163	36.2
Working experience	From 15 to 24 years	113	25.1
	From 25 years – and over	79	17.6
	Internal control and internal audit officers	85	18.9
Walling maiting	Credit officiers	157	34.9
Working position	Treasury and payment officers	129	28.9
	Others	79	17.6
Oussuisstians	Head office	95	22.2
Organisations	Branch	221	49.1
	Transaction office	134	29.8
01.	State-owned JSCB (4)	69	15.3
Ownership	Private ownership JSCB (27)	381	84.7
	Under 15 bln USD (16)	224	49.8
Doub sine	From 15 USD to under 30 bln USD (7)	116	25.8
Bank size	From 30 bln USD to under 45 bln USD (2)	41	9.1
	From 45 bln USD and over (3)	69	15.3

# **Validating Measurement Model for Lower Order Constructs (LOC)**

Assessing the Quality of Indicators

TABLE 2A OUTER LOADINGS OF THE CONSTRUCTS

Variables	STR	CMM	CTR	GNC	GOV	INF	COL	INT	INV	IRC	KNL
STR1	0.900										
STR2	0.902										
STR3	0.873										

Variables	STR	CMM	CTR	GNC	GOV	INF	COL	INT	INV	IRC	KNL
CMM1		0.805									
CMM2		0.787									
CMM3		0.742									
CMM4		0.726									
CTR1			0.850								
CTR2			0.887								
CTR3			0.896								
GNC1				0.775							
GNC2				0.833							
GNC3				0.733							
GNC4				0.793							
GNC5				0.884							
GOV1					0.800						
GOV2					0.847						
GOV3					0.814						
INF1						0.890					
INF2						0.874					
INF3						0.906					
COL1							0.835				
COL2							0.806				
COL3							0.845				
ITG1								0.900			
ITG2								0.846			
ITG3								0.870			
INV1									0.849		
INV2									0.875		
INV3									0.811		
IRC1										0.854	
IRC2										0.798	
IRC3										0.816	
KNL1											0.922
KNL2											0.922
KNL3											0.869

TABLE 2B **OUTER LOADINGS OF THE CONSTRUCTS** 

Variables	COL	PCA	PRF	RNR	SOS	SPT	TWK	VCR	VER	VPR	VRL
COL1	0.835										
COL2	0.806										
COL3	0.845										
PCA1		0.864									
PCA2		0.877									
PCA3		0.832									
PRF1			0.824								
PRF2			0.809								

Variables	COL	PCA	PRF	RNR	SOS	SPT	TWK	VCR	VER	VPR	VRL
PRF3			0.818								
PRF4			0.884								
PRF5			0.908								
RNR1				0.913							
RNR2				0.910							
RNR3				0.878							
SOS1					0.793						
SOS2					0.826						
SOS3					0.839						
SOS4					0.723						
SPT1						0.900					
SPT2						0.902					
SPT3						0.873					
TWK1							0.876				
TWK2							0.896				
TWK3							0.880				
VCR1								0.873			
VCR2								0.873			
VCR3								0.905			
VER1									0.822		
VER2									0.842		
VER3									0.840		
VPR1										0.795	
VPR2										0.864	
VPR3										0.875	
VRL1											0.836
VRL2											0.872
VRL3											0.876

The evaluation of the reflective measurement model of constructs ORC, RGC, ERM, and BVC shows that the Outer loadings of the variables are all greater than or equal to 0.7 (see Tables 2a, 2b).

GOV3 SPT1 SPT2 SPT3 KNL1 0.874 (0.000) 0.855 (0.000) 0.922 (0.000) 0.849 (0.000) 800 (0.000) 0.814 (0.000) 0.918 (0.000) 0.922 (0.000) 0.869 (0.000) 0.890 (0.000) 0.906 (0.000) 0.847 (0.000) **4** 0.875 (0.000) 0.812 (0.000) KNI INV INF CMM1 CMM GOV 0.673 (0.000) 0.805 (0.000) 0.826 (0.000) **▼** 0.787 (0.000) -0.807 (0.000) 0.864 (0.000) 0.742 (0.000) 0.877 (0.000) 0.726 (0.000) 0.832 (0.000) RGC COL 0.835 (0.000) 0.873 (0.000) 0.000 (0.821) **4** 0.806 (0.000) <sup>2</sup> 0.872 (0.000) VCR2 0.177 (0.000) 0.845 (0.000) 0.905 (0.000) 0.341 (0.000) 0.517 (0.000) BVA 0.850 (0.000) 0.297 (0.000) **4** 0.887 (0.000) 0.795 (0.000) 0.896 (0.000) 0.864 (0.000) 0.213 (0.000) 0.006 (0.160) 0.875 (0.000) 0.297 (0.000) VPR ORC VPR3 0.303 (0.000) TWK 0.000 (0.818) 0.000 (0.774) 0.876 (0.000) VER1 0.822 (0.000) 0.896 (0.000) 0.798 (0.000) - 0.842 (0.000) ► VER2 0.222 (0.000) 0.880 (0.000) -0.001 (0.756) 0.840 (0.000) 0.854 (0.000) IRC1 0.816 (0.000) VER STR IRC3 0.173 (0.000) 0.900 (0.000) RNR1 0.902 (0.000) 0.836 (0.000) 0.913 (0.000) 0.873 (0.000) 0.183 (0.000) 0.872 (0.000) 0.910 (0.000) 0.878 (0.000) 0.876 (0.000) ITG VRL 0.325 (0.000) 0.391 (0.000) 0.302 (0.000) 0.900 (0.000) 0.846 (0.000) 0.775 (0.000) 0.870 (0.000) 0.833 (0.000) PRF 0.793 (0.000) 0.733 (0.000) 0.896 (0.000) 0.826 (0.000) 0.723 (0.000) 0.809 (0.000) 0.884 (0.000) GNC 0.793 (0.000) 0.849 (0.000) 0.884 (0.000) 0.824 (0.000) 0.908 (0.000) 0.818 (0.000) 0.851 (0.000)

FIGURE 2
PATH COEFFICIENTS OF THE MEASUREMENT MODEL OF LOC

Assessment of Reliability and Validity of Constructs

The composite confidence (CR) equals or exceeds 0.758 (see Table 3). This means that the scales have an internally consistent level of confidence. In addition, the extracted variance (AVE) values of all scales satisfy the condition greater than 0.587 (see Table 3). This proves that the scales are all convergent.

TABLE 3
CONSTRUCT RELIABILITY AND VALIDITY

Constru	Cronbach's	Composite reliability	Composite reliability	Average variance
cts	alpha	(rho_a)	(rho_c)	extracted (AVE)
STR	0.871	0.872	0.921	0.795
CMM	0.765	0.768	0.850	0.587

Constru	Cronbach's	Composite reliability	Composite reliability	Average variance
cts	alpha	(rho_a)	(rho_c)	extracted (AVE)
CTR	0.851	0.850	0.910	0.770
GNC	0.866	0.893	0.902	0.648
GOV	0.758	0.761	0.861	0.674
INF	0.869	0.869	0.920	0.792
COL	0.832	0.835	0.900	0.749
ITG	0.842	0.845	0.905	0.760
INV	0.800	0.801	0.883	0.715
IRC	0.761	0.763	0.863	0.677
KNL	0.889	0.892	0.931	0.818
COL	0.772	0.773	0.868	0.687
PCA	0.821	0.826	0.893	0.736
PRF	0.903	0.908	0.928	0.722
RNR	0.883	0.883	0.928	0.810
SOS	0.812	0.821	0.874	0.634
SPT	0.876	0.878	0.924	0.802
TWK	0.860	0.861	0.915	0.782

## Discriminants Validity

The result of assessing the discriminant validity of constructs by HTMT ratios and the Fornell-Lacker criterion shows that the index of HTMT is less than 0.85, and the square root of AVE of all constructs is greater than its correlations with other constructs in the model. Therefore, we can assume that the constructs meet the discriminant validity.

TABLE 4A HTMT CRITERIA

Constructs	CMM	COL	CTR	GNC	GOV	INF	INV	IRC	ITG	KNL	PCA
CMM											
COL	0.403										
CTR	0.332	0.486									
GNC	0.624	0.418	0.351								
GOV	0.215	0.436	0.354	0.282							
INF	0.187	0.432	0.326	0.387	0.687						
INV	0.387	0.502	0.405	0.395	0.340	0.292					
IRC	0.619	0.383	0.271	0.390	0.296	0.191	0.341				
ITG	0.343	0.585	0.468	0.281	0.401	0.370	0.401	0.398			
KNL	0.334	0.365	0.318	0.283	0.604	0.496	0.248	0.346	0.299		
PCA	0.195	0.389	0.363	0.307	0.714	0.547	0.343	0.125	0.302	0.545	

# **TABLE 4B** HTMT CRITERIA

Constructs	PRF	PRO	RNR	SOS	SPT	STR	TWK	VCR	VER	VPR	VRL
PRF											
PRO	0.290										
RNR	0.462	0.243									
SOS	0.412	0.474	0.429								
SPT	0.256	0.387	0.221	0.391							
STR	0.222	0.430	0.317	0.421	0.278						
TWK	0.247	0.402	0.269	0.332	0.256	0.390					
VCR	0.463	0.369	0.514	0.618	0.422	0.435	0.368				
VER	0.529	0.43	0.506	0.688	0.533	0.459	0.385	0.752			
VPR	0.434	0.512	0.522	0.656	0.426	0.476	0.400	0.658	0.652		
VRL	0.431	0.449	0.445	0.661	0.445	0.477	0.393	0.663	0.578	0.591	

# TABLE 5A FORNELL-LARCKER CRITERIA

Constructs	CMM	COL	CTR	GNC	GOV	INF	INV	IRC	ITG	KNL	PCA
CMM	0.766										
COL	0.310	0.829									
CTR	0.269	0.394	0.878								
GNC	0.497	0.354	0.316	0.805							
GOV	0.168	0.335	0.283	0.245	0.821						
INF	0.154	0.354	0.28	0.364	0.559	0.890					
INV	0.303	0.395	0.334	0.339	0.263	0.242	0.846				
IRC	0.477	0.293	0.219	0.324	0.226	0.155	0.265	0.823			
ITG	0.28	0.473	0.396	0.263	0.321	0.317	0.329	0.32	0.872		
KNL	0.28	0.303	0.276	0.257	0.496	0.437	0.21	0.286	0.259	0.905	
PCA	0.157	0.311	0.304	0.274	0.566	0.462	0.279	0.093	0.252	0.464	0.858

# **TABLE 5B** FORNELL-LARCKER CRITERIA

Construct	PRF	PRO	RNR	SOS	SPT	STR	TWK	VCR	VER	VPR	VRL
S											
PRF	0.850										
PRO	0.254	0.866									
RNR	0.414	0.209	0.900								
SOS	0.389	0.412	0.393	0.796							
SPT	0.230	0.303	0.194	0.360	0.896						
STR	0.199	0.366	0.278	0.383	0.242	0.892					
TWK	0.219	0.340	0.234	0.301	0.222	0.338	0.884				

VCR	0.412	0.312	0.449	0.572	0.364	0.378	0.316	0.883			
VER	-	-	-	-	-	-	-	-	0.835		
	0.447	0.347	0.421	0.603	0.441	0.379	0.316	0.617			
VPR	0.372	0.418	0.439	0.571	0.357	0.397	0.334	0.546	-	0.84	
									0.516	5	
VRL	0.375	0.374	0.382	0.589	0.379	0.406	0.333	0.561	-	0.48	0.86
									0.466	3	1

The processing result shows that all items' cross-loadings are higher on their parent construct than other constructs in the model. Thus, there are issues of discriminant validity.

## **Validating Measurement Model for Higher-Order Constructs (HOC)**

The embedded two-stage method evaluated the high-order construct ERM, ORC, and BVC measurement models. The degree of correlation between the new scale and other variables, as well as other measures aimed at the same construct, is evaluated by convergent validity (see Figure 2).

## Assessment of Formative Model

**Assessment of Convergent Validity.** Using a repeated indicator approach, the formative measurement model of the latent concept of ERM, ORC, and BVC was evaluated. Redundancy analysis was used to assess the convergence of formative scales (Chin, 1998). The standardised beta coefficient must be 0.708 to be considered convergent (Hair et al., 2017). The findings show accurate ERM convergence with a beta coefficient of 0.873, an R<sup>2</sup> of 0.763, an adjusted R<sup>2</sup> of 0.762 (see Figure 3), ORC convergence with a beta coefficient of 0.857, an R<sup>2</sup> of 0.735, and an adjusted R<sup>2</sup> of 0.735 (see Figure 4), and BVC convergence with a beta coefficient of 0.863, an R<sup>2</sup> of 0.745, and an adjusted R<sup>2</sup> of 0.745 (see Figure 5).

FIGURE 3
CONVERGENCE VALIDITY OF LOWER-ORDER CONSTRUCT ERM

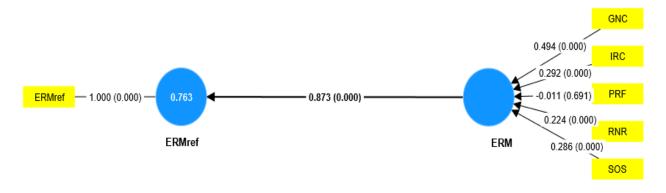


FIGURE 4
CONVERGENCE VALIDITY OF LOWER-ORDER CONSTRUCT ORC

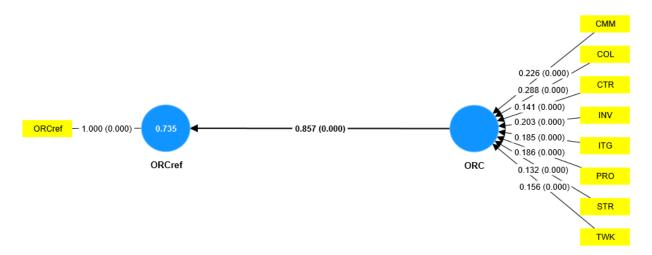
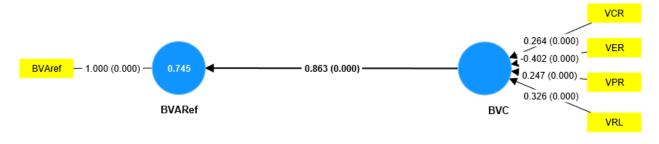


FIGURE 5
CONVERGENCE VALIDITY OF LOWER-ORDER CONSTRUCT BVA



#### Assessment of VIF

Results from multicollinearity tests were less than 3, and P < 0.05 was used to indicate statistical significance (see Table 8).

## Assessment of Outer Weights

Evaluation of the formative model of latent variables ORC, ERM, and BVC showed that observed variables with Outer weights were all greater than 0.118 with p<0.05. Thus, the second-order variables are assumed to be significant in the model (see Table 8).

### Assessment of the Reflective Model of HOC

Assessment of Outer Loadings. Evaluation of the reflective model of latent construct RGC showed that observed variables with external loadings coefficients (Outer Loadings) were greater than 0.7 with p<0.05 (see Figure 6). The bootstrapping results show that the Outer Loadings of the relationship between the second-order and quadratic variables (GOV, INF, KNL, PCA, and SPT with RGC) have p<0.05 (see Table 6). Thus, the second-order variables are significant in the model.

**Assessment of Construct Reliability and Validity.** The construct reliability assessment reveals high reliability and explainability of the scales, with Cronbach's alpha and composite reliability above 0.7 and the extracted variance above 0.5, proving convergence (see Table 6).

TABLE 6 CONSTRUCT RELIABILITY AND VALIDITY

Constructs	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
GOV <- RGC	0.810	0.810	0.018	45.079	0.000
INF <- RGC	0.783	0.783	0.019	41.258	0.000
KNL <- RGC	0.719	0.717	0.031	23.045	0.000
PCA <- RGC	0.790	0.790	0.019	42.308	0.000
SPT <- RGC	0.775	0.775	0.023	33.995	0.000

Assessment of Discriminant Validity. The reflective model of HOC achieves discriminant validity using the HTMT and Fornell-Larcker criterion, with the HTMT index of latent variables being less than 0.85 and the square roots of AVE larger than the coefficients (see Table 7).

TABLE 7 HTMT RATIOS AND FORNELL-LARCKER CRITERION

Construct	HTMT	Construct	Fornell-Larcker
Construct	RGC		RGC
RGC		RGC	0.776

**TABLE 8** TESTING RESULTS OF THE HIGHER-ORDER CONSTRUCT (HOC)

НОС	Variables	Outer Weights	Outer loadings	P value	T statistics	VIF
ERM	GNC	0.199		0.000	4.320	1.663
	IRC	0.216		0.000	4.736	1.152
	PRF	0.148		0.000	3.732	1.412
	RNR	0.179		0.000	4.116	1.436
	SOS	0.610		0.000	14.1363	1.411
ORC	PRO	0.163		0.006	2.757	1.584
	CMM	0.150		0.008	2.649	1.203
	CTR	0.181		0.002	3.135	1.366
	ITG	0.218		0.000	3.699	1.691
	INV	0.189		0.001	3.281	1.375
	COL	0.280		0.000	4.357	1.588
	TWK	0.118		0.027	2.209	1.319
	STR	0.202		0.000	3.514	1.764
BVA	CVR	0.193		0.000	4.344	2.031
	VER	-0.359		0.000	8.976	1.771
	VPR	0.349		0.000	8.185	1.614
	VRL	0.344		0.000	10.522	1.585

НОС	Variables	Outer Weights	Outer loadings	P value	T statistics	VIF
RGC	GOV		0.810	0.000	45.077	
	INF		0.783	0.000	41.264	
	KNL		0.719	0.000	23.042	
	PCA		0.790	0.000	42.305	
	SPT		0.775	0.000	33.993	

The results of the assessment of the higher-order constructs showed that reliability and validity, discriminant validity, and multicollinearity validity of all scales of the models were statistically significant, with p < 0.05 (see Table 8).

## **Assessment of the Structural Model**

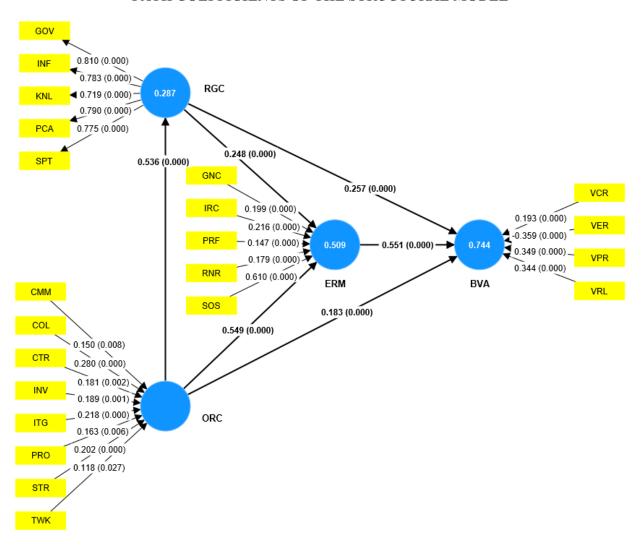
Path Coefficients of the Model

The results of the structural model assessment showed that the path coefficients in the structural model were statistically significant, with p < 0.05 (see Table 9). The diagram of the paths of the structural model is shown in Figure 6.

TABLE 9 PATH COEFFICIENTS OF THE STRUCTURAL MODEL

Constructs	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
ERM -> BVA	0.551	0.551	0.036	15.389	0.000
ORC -> BVA	0.183	0.186	0.040	4.566	0.000
ORC -> ERM	0.549	0.555	0.039	14.133	0.000
ORC -> RGC	0.536	0.541	0.037	14.521	0.000
RGC -> BVA	0.257	0.253	0.035	7.280	0.000
RGC -> ERM	0.248	0.244	0.042	5.907	0.000

FIGURE 6
PATH COEFFICIENTS OF THE STRUCTURAL MODEL



Assessment of Coefficient of Determination  $(R^2)$ 

Checking the level of explanation of the independent variables on the dependent variable shows that the standardised R<sup>2</sup> and adjusted R<sup>2</sup> values of constructs ERM, RGC, and BVA were statistically significant. The level of explanation of the independent variables on the dependent variables is from medium to high (see Table 10).

Constructs	$\mathbb{R}^2$	Adjusted R <sup>2</sup>	Description by Hair et al. (2017)
BVA	0.744	0.743	High
ERM	0.509	0.507	High
RGC	0.287	0.285	Moderate

## Assessment of Effect Size (f²)

Assessing the importance of the independent variables, effect size (f<sup>2</sup>) shows that the level of the impact of RGC on ERM, RGC on BVA, and ORC on BVA is at a low level ( $f^2 < 0.15$ ); the impact of ERM on BVA, ORC on ERM and ORC on RGC are at a high level (f<sup>2</sup>>0.35), and BVA has no effect at all (see Table 11).

**TABLE 11** THE VALUE OF f<sup>2</sup>

Constructs	BVA	ERM	ORC	RGC	Impact Level by Cohen (1988)
BVA					No effect
ERM	0.584				High
RGC	0.169				Low
RGC		0.090			Low
ORC	0.065				Low
ORC		0.437			High
ORC				0.402	High

The results of testing the predictive capacity index q<sup>2</sup> of each component model in the structural model show that the model has a moderate predictive level for the BVA, ERM, and RGC with  $q^2 = 0.473$ ,  $q^2 =$ 0.230,  $q^2 = 0.169$ , respectively, and has a no predictive for the ORC, with  $q^2 = 0.000$  (see Table 12).

**TABLE 12** THE VALUE OF q<sup>2</sup>

Constructs	SSO	SSE	q² (=1-SSE/SSO)	Predictive relevance
BVA	1800.000	947.844	0.473	High
ERM	2250.000	1732.843	0.230	Moderate
ORC	3600.000	3600.000	0.000	No relevance
RGC	2250.000	1870.818	0.169	Moderate

Thus, according to the research results in the above sections, all hypotheses from H1 to H6 are supported.

## Mediating Roles Test

Testing the mediating role of variables in the structural model shows that the specific indirect effect test for each indirect relationship in the structural model shows that the p-values of all paths are < 0.05 (see Table 13). The total effect test shows that each effect of the independent variables on the dependent variable in the structural model is statistically significant, with a p-value < 0.05 (see Table 14). This shows an indirect relationship between ORC and BVA, ORC and ERM, and between RGC and BVA exist in the model (see Table 15).

**TABLE 13** SPECIFIC INDIRECT EFFECTS

Paths	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
ORC -> RGC -> BVA	0.138	0.137	0.021	6.461	0.000
ORC -> ERM -> BVA	0.302	0.306	0.029	10.556	0.000

ORC -> RGC -> ERM -> BVA	0.073	0.073	0.015	4.867	0.000
RGC -> ERM -> BVA	0.137	0.135	0.026	5.245	0.000
ORC -> RGC -> ERM	0.133	0.132	0.025	5.324	0.000

## TABLE 14 TOTAL INDIRECT EFFECTS

Paths	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
ORC -> BVA	0.513	0.515	0.030	17.210	0.000
ORC -> ERM	0.133	0.132	0.025	5.324	0.000
RGC -> BVA	0.137	0.135	0.026	5.245	0.000

TABLE 15
DIRECT, INDIRECT, AND TOTAL EFFECTS

Independent variable Dependent Variable	Type of effects	BVA	ERM	RGC
	Direct	0.551		
ERM	Indirect			
	Total	0.551		
	Direct	0.183	0.549	0.535
ORC	Indirect	0.513	0.133	
	Total	0.696	0.682	0.535
	Direct	0.257	0.249	
RGC	Indirect	0.137		
	Total	0.394	0.249	

## **Moderating Role of Categorical Variables**

The multigroup analysis (MGA) showed a difference in the path coefficients in the model under the moderation of the respondents' work positions, bank size, and bank organisations. The path coefficient of ORC->ERM for the head office is greater than that of the branch, for the head office is greater than that of the transaction office, and for the head office is greater than that of the transaction office (see Table 16a, 16b, 16c). The path coefficient of ORC->ERM for control and audit officers is smaller than that of treasury and payment officers. The path coefficient of RGS->ERM for control and audit officers is higher than that of treasury and payment officers (see Table 17). The path coefficients of ORC->RGC for bank sizes from 15 to under 30 bln USD and 30 to under 45 bln USD are greater than those from 45 and over. (see Table 18a). The path coefficient of ORC->BVA for a bank's size from 15 to under 30 bln USD is higher than that from and over 45 bln USD (see Table 18a, 18b).

TABLE 16A MGA'S RESULT OF THE HEAD OFFICE-BRANCH

Paths		Head Office-I	ead Office-Branch			
	Head Office	Head Office Branch Difference				
ORC -> ERM	0.719	0.433	0.286	0.006		

## **TABLE 16B** MGA'S RESULT OF HEAD OFFICE-TRANSACTION OFFICE

Do 4le o		Head Office-Transa	action office		
Paths		Head Office	Transaction office	Difference	P value
	ORC -> ERM	0.668	0.403	0.256	0.016

## TABLE 16C MGA'S RESULT OF BRANCH-TRANSACTION OFFICE

Paths		Branch – Transac	nsaction office		
	Branch	Transaction office	Difference	P value	
ORC -> ERM	0.638	0.433	0.205	0.030	

## **TABLE 17** MGA'S RESULT OF POSITIONS

	Control &	Audit Officers – Trea	sury & Payment Officers		
Paths	Control & Audit Officers	Treasury & Payment Officers	Difference	P value	
ORC -> ERM	0.619	0.378	0.241	0.028	

## TABLE 18A MGA'S RESULT OF BANK SIZE

	From 15 to	under 30 bln USD –	From 45 bln USD to over		
Paths	From 15 to under	From 45 bln USD	Difference	P value	
	30 bln USD	to over	Difference		
ERM -> BVA	0.653	0.330	0.323	0.028	
ERM -> RGC	0.555	0.260	0.295	0.023	

## **TABLE 18B** MGA'S RESULT OF BANK SIZE

	From 15 to	under 30 bln USD - 1	From 45 bln USD to over		
Paths	From 15 to under	From 45 bln USD	Difference	P value	
	30 bln USD	to over	Difference	r value	
ORC -> RGC	0.729	0.260	0.469	0.005	

#### **DISCUSSION**

Research results show ERM is significantly associated with GNC, SOS, PRF, RNR, and ICR. This is consistent with COSO (2017). ORC is significantly associated with CAD, CMM, CTR, COL, INV, COL, and TWK. That is consistent with Janićijević (2013), Andersen and Lueg (2017), Sebastião et al. (2017), Ingham (2017), Torgaloz (2021), and Lusty and Ariyanto (2023). GOV, INF, KNL, PCA, and SPT significantly influence RGC. That is consistent with Bromiley et al. (2015) and Khan et al. (2019). BVA is significantly associated with VCR.

The research results also show that ERM positively influences BVA. This is consistent with the view that culture critically influences ERM (COSO, 2017). RGC positively influences the ERM. This is consistent with the view that ERM is a capability and practice (COSO, 2017; ISO, 2018). ORC positively

influences RGC. In addition, RGC plays a mediating role in the relationship between ORC and ERM and between ORC and BVA; ERM plays a mediating role in the relationship between ORC and BVA and between RGC and BVA. The multi-group analysis (MGA) results show a difference in the path coefficient under moderating the respondents' work positions, bank size, and bank organisations. Thus, the research supports H1-:- H10, rejects H11-1-:- H11-3; H11-4, H11-7 and partially supports H11-5, H11-6, and H11-8 (see Table 21).

**TABLE 21** RESULTS OF TESTING THE RESEARCH HYPOTHESES

No	Hypothesis	Relationship between variables and concepts	Beta	P value	Conclusion
1	Hypothesis H1	ERM positively impacts BVA.	0.551	0.000	There is no evidence to reject
2	Hypothesis H2	ORC positively impacts BVA.	0.183	0.000	There is no evidence to reject
3	Hypothesis H3	RGC positively impacts BVA.	0.257	0.000	There is no evidence to reject
4	Hypothesis H4	ORC positively impacts ERM.	0.549	0.000	There is no evidence to reject
5	Hypothesis H5	RGC positively impacts ERM.	0.257	0.000	There is no evidence to reject
6	Hypothesis H6	ORC positively impacts RGC.	0.536	0.000	There is no evidence to reject
7	Hypothesis H7	ERM plays a mediating role in the relationship between RGS and BVA.		0.000	There is no evidence to reject
8	Hypothesis H8	ERM plays a mediating role in the relationship between RGC and BVA.		0.000	There is no evidence to reject
9	Hypothesis H9	RGC plays a mediating role in the relationship between ORC and BVA.		0.000	There is no evidence to reject
10	Hypothesis H10	RGC plays a mediating role in the relationship between ORC and ERM.		0.000	There is no evidence to reject
11	Hypothesis H11-1	The sex moderates the path coefficients of the structural model.		> 0.05	Rejected
12	Hypothesis H11-2	The age moderates the path coefficients of the structural model.		> 0.05	Rejected
13	Hypothesis H11-3	The education level moderates the path coefficients of the structural model.		>0.05	Rejected
14	Hypothesis H11-4	The work experience moderates the path coefficients of the structural model.		> 0.05	Rejected
15	Hypothesis H11-5	Working position moderates the path coefficients of the structural model.		< 0.05	Partially supported
16	Hypothesis H11-6	The organisation level moderates the path coefficients of the structural model.		< 0.05	Partially supported
17	Hypothesis H11-7	The bank's ownership moderates the path coefficients of the structural model.		> 0.05	Rejected
18	Hypothesis H11-8	The bank's size moderates the path coefficients of the structural model.		> 0.05	Partially supported

#### CONCLUSION AND IMPLICATIONS

ERM positively impacts BVA. Effective integration of ERM components such as GNC, SOS, PRF, RNR, and IRC will help increase the bank's BVA, namely created, preservated, and realised value. This indicates an effective ERM with core principles such as recognising culture, developing capabilities, applying practices, integrating strategy-setting and performance, managing risk to strategy and business objectives, and linking to value (COSO, 2017). Moreover, RGC, whose components, such as governance, systems, processes, and tools, will enhance an effective ERM and affect the bank's BVA. In addition, ORC's determinants, namely involvement, commitment, teamwork, collaboration, control, structure, integration, and process orientation, impact RGC, ERM, and BVA.

RGC is mediating the relationship between ORC and BVA and ORC and ERM. Banks should keep improving RGC and practices to strengthen the ERM framework. Since RGC mediates the relationship between ORC and ERM and between ORC and BVA, ERM is improved. Eventually, BVA banks need a mature RGC that provides assurance and insight with its objectivity where it is most needed. RGC is the crucial factor in three lines of defence that affect a bank's ERM. Therefore, BOD and management must continuously improve organisational governance systems to address critical risks and enhance risk discussions at the strategic level. The BOD and management of banks should accept the bank's RAP as a strategy component.

The construction of the research model is a multi-dimensional high-order model that facilitates testing of the overall complexity and evaluation of the conceptual ORC, RGC, ERM, and BVA. In addition, the higher-order structure provides a means to reduce collinearity between constructs and helps to reduce the number of path model relationships. The higher-order model of the ORC, ERM, and BVA variable is a formative model that allows the identification of the critical elements of a multidimensional concept.

Because ERM is considered a culture (COSO, 2017) and a crucial principle of RIM is human and cultural factors (ISO, 2018), banks need to build an internal-focused culture such as participation and commitment of individuals and organisations, teamwork, cooperation between members and groups, valuing control, structured, integrated and process-oriented.

Since ERM are capability and practices (COSO, 2017), HRM practices such as the policy of continuously investing in employee skills and abilities based on growth orientation, remuneration systems are associated with job performance, employees are involved in decision-making activities, etc. will contribute to the formation of a dynamic, influential ERM-oriented culture.

ERM is primarily designed to protect and enhance business value. However, ineffective ERM can lead to VER of Vietnam's JSCB. The primary reasons are poor corporate governance, ineffective leadership, organisational inefficiency, lack of innovation, talent management issues, increased risk exposure, misaligned RAP, excessive bureaucracy, resource constraints, ethical lapses, etc. BVE, the gradual decline in a company's overall worth, can have far-reaching and devastating consequences, such as negative economic, social, and mental impacts. Vietnam's JSCB must proactively identify and address the root causes of VER to mitigate these critically negative effects. This requires a proactive approach to RIM, strong leadership, and a focus on long-term sustainability.

ORC plays a pivotal role in BVC. It can enhance employee engagement and productivity, improve customer experience, increase innovation and adaptability, and enhance ethical and sustainable practices. However, a negative or toxic culture can lead to a decline in business value, affecting various aspects of banks, such as decreased employee morale and productivity, damaged reputation, reduced innovation and creativity, increased legal and regulatory risks, etc. To mitigate these risks, Vietnam's JSCB must build an ORC to promote strong leadership, sustain open communication, implement an appropriate employee recognition and rewards system, promote a healthy work-life balance, foster a diverse and inclusive workplace, encourage continuous improvement, and emphasise ethical behaviour and compliance with regulations.

Finally, the result of this study shows that the means of reversed items in Likert scales of VER1, VER2, and VER3 are 2.24, 2.08, and 2.31, respectively (after reverse, they are 2.76, 2.91 and 2.68, respectively). This shows that respondents point out the possibility of VER due to ORC, ERM and RGC of Vietnam's

JSCB. This accurately reflects the weaknesses of the finance and banking sector. Stakeholders of Vietnam's JSCB need to strengthen effective COG, and regulatory bodies need to supervise the banking system's operations more closely.

#### LIMITATIONS

Limitations of the study are that other crucial factors of the external environment influencing the implementation of ERM by banks have yet to be considered. Furthermore, the demographic variables used still do not highlight the specific attributes of the banking industry, such as capital structure, scale of and scope of business, etc.

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