

Advancing Risk Management Maturity – Transforming Assessments into Economically Impactful Tools

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Abstract. Risk maturity models (RMMs) are essential for advancing systematic risk management and continuous improvement. Traditionally used as diagnostic tools to benchmark current practices and identify gaps, their role is increasingly extending to guide the integration of risk management into governance and strategic planning. This transformation yields a tangible economic impact: organizations enhance resilience, optimize resource allocation, and strengthen competitiveness, contributing to sustainable growth. Building on this perspective, the present study highlights the evolution of RMMs from assessment mechanisms to economically impactful tools, with a particular emphasis on their development in the Georgian context. © 2026 Bull. Natl. Acad. Sci. Georg.

Keywords: risk management maturity model, strategic tool, economic impact, maturity level

Introduction

Risk management maturity models (RMMs) emerged in the 1990s as organizations, particularly in finance, began formalizing risk practices into structured processes and governance mechanisms. Initially regarded as diagnostic tools, they enabled benchmarking, identification of deficiencies, and the creation of roadmaps. By the 2000s, RMMs became closely associated with enterprise risk management (ERM), positioning them as essential instruments for embedding risk practices across the enterprise and enhancing efficiency (Culp, 2001). Later in the 2010s, academic literature increasingly recognized RMMs as developmental frameworks

(Fraser & Simkins, 2010), enabling organizations to move from fragmented, compliance-driven practices toward integrated systems aligned with governance and strategy. Building on this idea, Wiczorek-Kosmala (2014) framed RMMs as strategic instruments that guide comprehensive risk management, shaping decision-making, resource allocation, and organizational culture. This evolution underscored their economic significance: mature risk practices not only mitigate losses but also enhance competitiveness and long-term value creation. In the 2020s, RMMs have been increasingly linked to resilience, sustainability, and ESG frameworks, reflecting their role in helping organizations

adapt to global crises, technological disruption, and geopolitical uncertainty. Converging with international standards such as COSO (Committee of Sponsoring Organizations of the Treadway Commission, 2017) and ISO (International Organization for Standardization, 2018), RMMs now provide staged pathways that align governance with economic impact, transforming assessments into tools that drive efficiency, resilience, and sustainable growth.

This paper introduces a risk maturity model tailored to the Georgian context and demonstrates its practical application for organizations implementing comprehensive risk management. It positions RMMs as economically impactful instruments that shape long-term strategies, enhance competitiveness, and contribute to sustainable growth.

Review of Risk Maturity Models

In 2020, risk management maturity models increasingly attracted scholarly attention, as researchers began applying them across diverse sectors including banking, logistics, information security, and public administration. This expansion marked their transformation from assessment driven instruments into versatile frameworks that strengthen organizational resilience, governance, and economic competitiveness across industries. Consequently, tailored models have been developed to address sector-specific needs – for example, in Central banks (Denewet et al., 2019), logistics systems (Tubis & Werbińska-Wojciechowska, 2021), Information Security (Malik, 2010), and Tax administrations (OECD, 2021). Practitioners have also emphasized the strategic importance of RMMs: The International Monetary Fund (Denewet et al., 2019) recommended that maturity models be used not only as diagnostic tools but also as developmental mechanisms, capable of delivering measurable benefits such as cost-efficiency, optimized resource allocation, and strengthened resilience. Likewise, the OECD (2021) issued formal guidance to support their adoption in tax

administrations, recognizing their role in standardizing practices and embedding risk management into governance structures. These endorsements increasingly position RMMs as powerful tools for organizational development and economic outcomes, transcending their traditional role as technical frameworks.

How to structure and develop risk maturity models in the context of Georgia. Typically, Risk Maturity Model (RMM) is structured as a matrix in which progressive levels of maturity are cross-referenced with key attributes of risk management practice (Wieczorek-Kosmala, 2014). The Maturity levels can be understood as progressive milestones that provide a structured roadmap for incremental advancement, guiding organizations from basic practices to fully developed and mature systems. (Hillson 1997). The number of maturity levels may vary, generally ranging from three to five, depending on the complexity of the institution and the sophistication of its risk management processes. The International Monetary Fund proposes a four-level structure: Informal /Unstructured, Developing, Implementing, and Optimized (Denewet et al., 2019). Deloitte's Risk Maturity framework outlines five stages: Initial/Ad Hoc, Fragmented, Comprehensive, Integrated, and Strategic. (Deloitte, 2023) suggested a five-level model consisting of Ad Hoc, Initial, Constant, Managed, and Strategic. The abovementioned variations illustrate the flexibility for organizations, while maintaining the core principle of progressive development in risk management capability.

The most critical aspect of designing maturity models lies in the careful selection of attributes which need to respond to specific requirements (Bał, Jedynak, 2023), often guided by international standards. Once attributes are defined, activities are mapped to each, creating a structured roadmap supported by actionable steps that link priorities to implementation (Deloitte, 2023).

Overall, to develop Risk Maturity Models, organizations should follow three essential steps:

first, define maturity levels to establish a progressive scale that ranges from ad hoc practices to fully integrated risk management, providing a clear roadmap for assessing current capabilities; second, select attributes that capture the most relevant dimensions of risk management and reflect both internal and external contexts; and finally, map activities to each attribute across the maturity levels, translating the framework into actionable guidance that aligns specific practices and interventions with every stage of maturity.

RMM for Georgian context. Step 1 involves defining five levels of Risk Maturity (Table 1). The introduction of this five-level framework provides the necessary granularity to guide organizations through a structured and detailed progression. By distinguishing maturity into five distinct stages, organizations are able to move systematically from reactive practices toward proactive and fully optimized risk management systems.

As for second step, five critical attributes were identified as the most relevant and applicable for Georgian context, considering the international standards and local legal requirements:

Risk structure and governance is a critical attribute because it establishes clear accountability and creates consistency across departments. Clear accountability reduces duplication of effort and prevents costly management, moreover strong

governance builds stakeholder trust and enhances access to different resources (Li & Li, 2021).

Risk management process is a core attribute of maturity models, as it translates governance into a systematic approach for identifying, assessing, responding to, and monitoring risks. By establishing this process, organizations prevent financial losses, operational disruptions, and reputational damage. In Georgia, the risk management process for public organizations is guided by the *Law on Public Internal Control* (2010, revised 2011), while the commercial sector primarily aligns with international frameworks such as COSO (Committee of Sponsoring Organizations of the Treadway Commission, 2017) and ISO (International Organization for Standardization, 2018).

Risk reporting constitutes a fundamental mechanism for communicating exposures and the overall risk profile. Effective reporting plays a critical role in supporting budgeting processes and ensuring transparency (Mirela, 2018). Moreover, ISO (International Organization for Standardization, 2018) establishes explicit requirements for organizations to document and communicate both the risk management process and its outcomes through appropriate mechanisms. Consequently, risk reporting emerges as a critical attribute as supporting accurate budgeting and resource planning, avoiding misallocation of funds.

Table 1. Five levels of Risk Maturity

Maturity levels	Description
Foundational	The risk management function is absent, and risk management processes are decentralized.
Developing	A formal risk management function is established, with defined roles and responsibilities. Core elements of risk management are present but not yet fully structured.
Implementing	The risk management process becomes formalized. Tools and techniques are introduced, policies and governance structures are established, and regular capacity-building programs are initiated.
Optimized	Risk management is fully operational, centralized, and seamlessly integrated across all organizational processes. Strong risk management governance structure is in place.
Advanced	Risk management system refers to only existing but emerged risks. Processes are fully integrated into strategy development, change management, budgeting and decision making.

Source: Elaborated by author.

Risk culture – The Institute of Risk Management (IRM) defines risk culture as the collective values, beliefs, knowledge, attitudes, and understanding about risk that are shared by people within an organization who have a common purpose, emphasizing that culture is not just about formal policies but about the behaviors and mindset that shape how risks are perceived and managed (IRM, 2012). Risk Culture fosters early escalation of issues, which in turn minimizes the economic impact of crises. Overall embedding risk awareness into daily decisions improves operational efficiency.

Risk integration means embedding risk considerations into every aspect of organizational activity – strategy-setting, governance, budgeting, performance, and culture – so that risk management is not treated as a separate compliance function but as a driver of value creation and resilience (Committee of Sponsoring Organizations of the Treadway Commission, 2017.) By situating risk management within a strategic context, orienting it toward decision-making, and aligning it with value-based management, integration diverges from traditional frameworks and enhances organizational sustainability (Gleißner & Berger, 2022).

Once the critical attributes were identified, specific activities shall be mapped to each attribute,

creating a structured pathway that defines the overall roadmap. This mapping ensures that every attribute is supported by actionable steps, allowing the organization to move systematically from recognition of key priorities to practical implementation. By linking attributes to activities, the roadmap becomes both strategic and operational, guiding progress in a step-by-step manner while maintaining alignment with broader objectives (Table 2).

To summarise, the development of the Risk Maturity Model (RMM) comprised of 3 steps: first, a five-level maturity scale was established; second, five critical key attributes were selected; and third, each attribute was mapped with specific activities translating the theoretical framework into actionable roadmap for improvement of maturity.

Conclusion

Risk Management Maturity Models (RMMs) should be regarded not merely as diagnostic tools but as strategic instruments that actively shape the evolution of organizational risk management systems. Traditionally, these models have been used to benchmark existing frameworks and identify areas for improvement. However, their contemporary relevance lies in embedding risk

Table 2. Mapping the attributes with activities

Attributes	Activities
Risk structure and governance	Establishing structure. Formalization of roles and responsibilities. Development of risk management policy. Creation of oversight bodies (e.g., risk committee).
Risk management process	Selection of Risk Management Framework. Establishing risk taxonomy. Establishing the process of Risk Identification, Assessment, Evaluation, Response, Monitoring and Review.
Risk reporting	Defining reporting lines and escalation procedures. Develop Risk Reporting Tools.
Risk culture	Provide regular training programs and awareness initiatives. Promote lessons learned to reinforce the value of proactive risk management. Encourage a culture of openness.
Risk integration	Integrate risk management considerations into the budgeting process. Align risk assessments with strategy setting, project planning, and performance management. Ensure that risk management is integrated into decision-making, supporting long-term sustainability and adaptability.

management into governance, organizational culture, and resource allocation and planning. Accordingly, they deliver measurable economic benefits. Such as resilience against operational disruptions, increased cost-efficiency and sustainability against volatile environments.

Within the Georgian context, RMMs must be grounded in critical attributes that reflect the specific challenges of each industry, ensuring compliance with legal obligations and alignment with international standards. By mapping these attributes to concrete activities, organizations can

develop structured pathways that serve as systemic roadmaps for the advancement of risk practices.

This study underscores the importance of continuous improvement and adaptation in risk management as a driver of long-term economic sustainability. It is recommended that Georgian organizations regularly assess their risk management maturity using the proposed model and translate the findings into targeted improvement opportunities that yield efficiency gains and increased competitiveness.

ეკონომიკა

რისკების მართვის სიმწიფის განვითარება – შეფასებიდან ეკონომიკური გავლენის მქონე ინსტრუმენტამდე

ქ. ნადირაშვილი

ივანე ჯავახიშვილის სახ. თბილისის სახელმწიფო უნივერსიტეტი, ეკონომიკისა და ბიზნესის ფაკულტეტი; „ვინკა იმფაქტ ფაინანსი“; საერთაშორისო სავალუტო ფონდი (სსფ)

(წარმოდგენილია აკადემიის წევრის ა. სილაგაძის მიერ)

რისკის მართვის სიმწიფის მოდელები მნიშვნელოვანი ინსტრუმენტებია სისტემური რისკის მართვისა და მუდმივი გაუმჯობესებისათვის. ტრადიციულად, აღნიშნული ინსტრუმენტები გამოიყენებოდა, როგორც დიაგნოსტიკური მექანიზმები, არსებული რისკის პრაქტიკის შეფასებად და ხარვეზების გამოსავლენად. თუმცა აღსანიშნავია, რომ მათი როლი სულ უფრო მეტად იზრდება და ყალიბდება, როგორც რისკის მართვის ინტეგრირების ინსტრუმენტი, ორგანიზაციების მმართველობასა და სტრატეგიულ დაგეგმვაში. ამგვარი ტრანსფორმაცია კი იძლევა საკმაოდ ხელშესახებ ეკონომიკურ ეფექტს: ორგანიზაციები ზრდიან მდგრადობას, აუმჯობესებენ რესურსების განაწილებას და აძლიერებენ კონკურენტუნარიანობას. ამ მიდგომაზე დაყრდნობით, ნაშრომში წარმოჩენილია რისკის მართვის სიმწიფის მოდელების ევოლუცია შეფასების ინსტრუმენტიდან ეკონომიკურად – გავლენიან ინსტრუმენტამდე, და

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