

RESEARCH ARTICLE OPEN ACCESS

Risk Management in the Public Sector: A Comparative Analysis of Central Government Settings in France, Germany, and Italy

Léonard Gourbier¹ | Silvia Iacuzzi²  | Emanuele Padovani³  | Iris Saliterer⁴ 

¹Université Paris-Dauphine, Dauphine Research in Management, MOST Place du Maréchal de Lattre de Tassigny, Paris, France | ²Dipartimento di Scienze Economiche e Statistiche, University of Udine, Udine, Italy | ³Department of Management, University of Bologna, Bologna, Italy | ⁴Institute of Public and Nonprofit Management, University Freiburg, Freiburg, Germany

Correspondence: Emanuele Padovani (emanuele.padovani@unibo.it) | Iris Saliterer (Iris.Saliterer@vwl.uni-freiburg.de)

Received: 16 October 2023 | **Revised:** 13 July 2024 | **Accepted:** 9 September 2024

Funding: This publication is based on evidence gathered from the research project “Strengthening Public Financial Management and Control,” funded by the EEA and Norway Grants within the 2014-2021 Programme “Good Governance, Programme Areas 16 - Good Governance, Accountable Institutions.” The project was carried out with the organizational and scientific support of the Ministry of Finance of the Czech Republic and Masaryk University in Brno.

Keywords: central government | internal control | public sector | regulatory framework | risk management

ABSTRACT

In recent years, public organizations have come under increasing pressure to implement comprehensive risk management (RM) systems that are based on international frameworks and standards. However, little is known about whether different countries have addressed this issue in their regulatory strategies and how they have done so. To address this gap, this study conducts a cross-country analysis and introduces and applies an analytical framework to compare the different RM approaches adopted by the central governments of France, Germany, and Italy. This comparison sheds light on the regulatory landscape in the three largest countries in the European Union and reveals the diverse RM frameworks with varying focuses, drivers, designs, and levels of integration. Although each country has unique nuances in its approaches, commonality is the primary perception of risk as a threat. This stance, although understandable in the context of financial risks, calls for a shift toward viewing risk as an opportunity, thus promoting a balanced approach that goes beyond mere compliance.

1 | Introduction

Over the last few decades, and in line with a broader trend, public organizations have faced increasing pressure to adopt comprehensive risk management (RM) systems (De Lorena and Costa 2023; Ferry and Eckersley 2019; Palermo 2014; Rana, Hoque, and Jacobs 2018; Vinnari and Skærbæk 2014). Partly driven by New Public Management (NPM) reforms, public organizations have begun to implement processes that identify, assess, and control both financial and broader non-financial risks (Bracci et al. 2021; Gong, Vesty, and Subramaniam 2022; Kominis et al.

2021; Mahama et al. 2020; Woods 2009). Moreover, numerous recent crises have affected public organizations and exposed new challenges (Barbera et al. 2017; Warren 2019; Zhang, Welch, and Miao 2018). The subprime crisis in conjunction with the deteriorating public finances of many countries has called these countries' ability to manage financial risks into question (Barbera et al. 2017; Ferry and Eckersley 2019). Moreover, COVID-19 has tested public organizations' ability to ensure the delivery and continuity of essential public services (Rana, Wickramasinghe, and Bracci 2022). The climate crisis that has manifested as extreme weather events and changing rainfall patterns is also challenging

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these organizations' ability to address major environmental risks that affect public infrastructure, services, and communities (Caldarulo and Welch 2023; Warren 2019). Developments in the technological domain, which present multifaceted challenges, also pose risks to both data privacy and the delivery of public services (Rana, Wickramasinghe, and Bracci 2022; Skierka 2023).

Against this backdrop, it is not surprising that RM practices in public organizations are increasingly in the spotlight (Bracci et al. 2021). This development is also being driven by international institutions urging public organizations to professionalize and standardize their internal control and RM systems by aligning their approaches with international frameworks (International Organization of Supreme Audit Institutions [INTOSAI] 2004, 2021, Institute of Internal Auditors [IIA] 2021). However, as these international recommendations and guidelines often lack the binding nature of laws or regulations, intriguing questions arise about their adoption and adaptation within different national contexts. In this regard, several contributions in public administration have highlighted the phenomenon of path dependency (Christensen and Lægveid 2007) and the importance of historical contextual factors and national administrative cultures in shaping regulatory practices (Pollitt 2015; Pollitt and Bouckaert 2017). Moreover, RM approaches, as evidenced by the literature, vary significantly in practice, including risk assessment methods and perceptions (Bracci et al. 2021; Carlsson-Wall et al. 2019; EC 2014). However, as these findings predominantly originate from analyses within distinct government levels or organizational units, a recent literature review identified a need for broader comparative studies—at the organizational as well as country levels (Bracci et al. 2021).

Our study addresses this gap by developing a comprehensive analytical framework that integrates critical RM-related dimensions identified in the literature to allow for a nuanced analysis of RM approaches, including the extent to which international RM guidelines have been “endogenized.” This framework provides a structured approach to compare RM practices across different national contexts, specifically focusing on how regulatory frameworks interpret and promote the implementation of RM concepts. Additionally, our study contributes to the literature by providing a common analytical tool for describing and comparing the RM systems implemented by different organizations with all their specific features. The framework is then applied to examine the regulatory context at the central government level in France, Germany, and Italy, taking into account laws, regulations, guidelines, and recommendations.

This examination thus provides a deeper understanding of the RM regulatory landscape across the three largest countries within the European Union (EU), by not only providing insights into the extent to which these countries have integrated internationally recognized and standardized RM frameworks into their approaches, but also highlighting both commonalities and divergences across broader analytical dimensions, that is, national interpretations (i.e., scope and perception) and implementations (i.e., pressure, actors involved, and integration) of RM approaches. In doing so, the analysis reveals how risk is conceptualized and managed across regulatory frameworks, offering a nuanced understanding of each country's RM approach. Moreover, the analytical framework for reviewing regulatory contexts

may also serve policymakers and professionals as a helpful tool for assessing and enhancing RM regulation and practices in other contexts.

The next section comprises a literature review on RM in public organizations, from which the analytical framework that guides the subsequent analysis is derived. The research methodology is then presented in the subsequent section. After this, the results of the analysis of each country are presented, followed by the discussion, in which the findings from the comparative analysis of the risk dimensions are synthesized. Lastly, the conclusion summarizes the contributions and limitations of this study as well as future research opportunities.

2 | Literature Review and Analytical Model

Organizations in the public and private sectors face myriad risks that can severely impact their financial stability, operations, and strategic objectives, and even threaten their very existence (Hood and Smith 2013). Therefore, it is not surprising that there is a compelling argument for organizations to implement effective RM frameworks that help them achieve their objectives by identifying, assessing, and mitigating these risks (Bracci et al. 2021; Rana, Hoque, and Jacobs 2018). In this context, international RM frameworks have emerged, such as that from the Committee of Sponsoring Organizations of the Treadway Commission (COSO 2004, 2017), which suggests that their standards and recommendations embody “best practices” (Paape and Speklé 2012, 548). These standards guide organizations in systematically developing effective structures and processes for identifying and detecting risks, assessing their importance, forecasting their likelihood of occurrence, and determining strategies for their management (COSO 2017; Palermo 2014). The COSO framework and its further developments have been adopted by many organizations, including government agencies (Bracci et al. 2021; Vinnari and Skaerbaek 2014; EC 2014) and standard-setting bodies such as INTOSAI and the IIA, which have endorsed the COSO framework and incorporated it into their internal control guidelines. However, although the general acceptance of these international frameworks and guidelines is widespread, the actual adoption of RM may vary between individual countries and organizations.

To address this complexity, we reviewed the literature on RM within the public sector, identifying critical and recurring themes and areas. These were then organized into six dimensions, facilitating a structured exploration of RM approaches across countries. Although international frameworks like COSO offer valuable insights, we recognized that relying solely on their dimensions for comparative analysis does not fully capture the broader aspects of RM implementation. Consequently, each dimension introduced below serves a dual purpose: it highlights key issues emphasized in the literature on managing risks in the public sector and provides a building block of the analytical framework we have developed.

2.1 | Risk Types

An important issue discussed in the literature is the type of risks that are accounted for in RM systems, in which the emphasis

is either on specific risk domains or over a broader spectrum. Historically, although the term “risk” might not have been explicitly used, the public sector has been largely preoccupied with safeguarding its resources and assets, particularly cash, against losses due to waste, abuse, mismanagement, errors, fraud, and unauthorized use or disposition (Bowlin 2020; Hay 1993; Lee 1971; Spira and Page 2003). Another important aspect that has become even more pronounced in the context of the austerity period following the financial crisis has been the strong focus on “balancing the budget,” denoting the avoidance of deficits as central objectives and the focus on the risks that could negatively affect them (Barbera et al. 2017; Bracci et al. 2015; Ferry and Eckersley 2019). In retrospect, all these aspects can be classified as financial risks, and assessing and mitigating them remains a core pillar of internal control in a public sector context.

With the emergence of NPM-inspired reforms, which were aimed at introducing private management techniques for enhancing efficiency and effectiveness, the scope of risks has been broadened and includes non-financial risks (Crawford and Stein 2004; Palermo 2014), subsequently referred to as non-financial risks. These are often embedded in risk typologies that are derived from international enterprise RM frameworks such as the COSO, and they typically include strategic and operational as well as politics-, reputation-, or compliance-related risks (Carlsson-Wall et al. 2019; Mahama et al. 2020; Narayan and Kommunuri 2021). This evolution is also evident in the literature on RM in the public sector, as the majority of publications focus on strategic and operational risks (Bracci et al. 2021).

Finally, new categories of risks continue to emerge that are shaped by evolving societal, environmental, and technological challenges (COSO 2018). Broadly, they can be referred to as contextual risks as they comprise the challenges related to social inequalities, environmental degradation, or data-related vulnerabilities (Mahama et al. 2020; Warren 2019). Unlike non-financial risks, which are—in the context of this study—internal and directly linked to actions and/or decisions taken by the administration, “contextual” risks are external and linked to the environment of public organizations (see also Barbera et al. 2017, referring to internal and external vulnerability sources in a resilience context).

2.2 | Risk Perception

How risk is perceived and interpreted is another important issue in the literature on managing risks in the public sector (Bullock, Greer, and O’Toole 2019). Although perceptions have evolved over time, risks have traditionally been viewed as adverse events that have negative consequences, thus essentially framing risks as threats (COSO 2013; Mahama et al. 2020).

However, risks can be seen not only as threats leading to losses but also as opportunities leading to gains or value creation (Azim and Nahar 2021; Bullock, Greer, and O’Toole 2019; Gong, Vesty, and Subramaniam 2022; Woods 2009). Therefore, recent studies in the public sector call for viewing risk from a dual perspective, thus moving from a reactive, compliance-driven approach to a more proactive one that is focused on risk profiling and forward-looking performance orientation (Collier 2009; Gong

and Subramaniam 2020; Gong, Vesty, and Subramaniam 2022). Nevertheless, adopting a comprehensive RM approach, which considers risks as both a threat and an opportunity, requires a fundamental change in risk culture (Barrett 2019; Narayan and Kommunuri 2021).

2.3 | RM Implementation

The third dimension focuses on the drivers of RM implementation. Identifying and understanding these drivers is important, as they not only capture the motivation behind the implementation of RM systems in public organizations, but they may also result in different patterns. Several studies, which have tested institutional theory assumptions (e.g., DiMaggio and Powell 1983), have shown that external forces and social norms drive public organizations to adopt RM systems (Alsharari 2022; Azim and Nahar 2021; Carlsson-Wall et al. 2019; Palermo 2014; Woods 2009). As such, the development of RM systems can be influenced by regulations or administrative authorities that impose them (*coercive pressure*), by an organization’s desire to imitate others (*mimetic pressure*), or by the standards set by professional bodies and prevailing best practice ideas that are recognized and supported by trained professionals in these fields (*normative pressure*; Azim and Nahar 2021; Palermo 2014). Coercive pressure together with detailed rules may lead to a defensive and compliance-driven approach (Hinna, Scarozza, and Rotundi 2018; Lapsley 2009; Palermo 2014), whereas advisory recommendations may result in a more adaptive approach. Both of these aspects are closely related to the next point.

2.4 | RM Design

The interplay between RM systems, anchored in national regulations or international frameworks, and those internally developed by field actors to meet specific needs is a topic of debate (Mahama et al. 2020; Carlsson-Wall et al. 2019). The latter often highlights a tension between standardization and flexibility (Arena, Arnaboldi, and Azzone 2010), seen as a trade-off in RM implementation (Carlsson-Wall et al. 2019). This dichotomy is already evident at the governance level, where discussions contrast principle- and rule-based approaches (Mahama et al. 2020).

In this regard, internationally recognized frameworks often signify a principle-based approach and, although considered formalized approaches (Carlsson-Wall et al. 2019; Hiebl 2022), emphasize high-level guidance that allows sectors and organizations to tailor RM to their context. Here, well-known frameworks or standards like COSO (1992, 2004) or ISO 3100 (2018) offer guidance regarding RM implementation. For example, COSO (1992) and COSO II (2004) focus on control environment, risk assessment, control activities, information and communication, and monitoring, whereas adaptations go further by emphasizing strategic RM across the entire organization. Another framework is the Three Lines of Defense Model issued by the Institute of Internal Auditors (IIA) (2013, 2020), which provides a structured approach to risk governance as it outlines clear roles for risk ownership (first line), oversight (second line), and independent assurance (third line). The Three Lines of Defense Model was

also substantially revised and updated in 2020 (IIA 2020) and has recently been transferred to the public sector (INTOSAI and IIA 2022). An important feature of the new model is a renewed focus on RM as an enabler, as it casts RM as a contributor to achieving objectives and creating value and not just as a mechanism for protecting the organization and value. This perspective suggests a more proactive role for RM in terms of identifying opportunities in emerging risks that can be exploited.

In contrast, national regulations traditionally lean toward a rule-based approach, often with a focus on strict compliance with defined procedures, although shifts from rules-based to principles-based approaches have been observed (see Mahama et al. 2020). In this context, it is possible that governments are integrating principle-based approaches, either through the adoption of international frameworks into their regulatory landscape (EC 2014) or by crafting their own principle-based strategies, thus giving public organizations the autonomy to manage risks according to their unique needs and challenges (Carlsson-Wall et al. 2019).

2.5 | Actors' Roles and Responsibilities

The fifth dimension relates to the actors involved in the RM process and the level at which it is carried out. Currently, specific responsibilities are either undefined or the management of strategic and political risks is primarily the responsibility of upper management, whereas lower management focuses on controlling operational risks (Mahama et al. 2020). However, in more evolved approaches, developing enterprise RM (ERM) systems in public organizations tends to incorporate all organizational actors in RM (Barrett 2019; Vasileios and Favotto 2021).

Furthermore, in the public sector, effective RM can only be achieved at the inter-organizational level by bringing together all the actors involved in the management of a public program, policy, or service, even when they belong to different organizations (Kominis et al. 2021). This may be challenging for public administrations that are often oriented vertically and focus on control and enforcement rather than on policy making or service delivery (European Commission [EC] 2017).

2.6 | RM Integration

The sixth and final dimension relates to RM integration in terms of understanding whether there are requirements or recommendations in place that address the integration of RM processes and routines into an organization's broader management processes and systems (Bracci et al. 2021; De Lorena and Costa 2023). Integrating RM with internal control necessitates advancing beyond mere monitoring and control to foster an RM culture within public organizations (Flemig, Osborne, and Kinder 2016; Palermo 2014). This integration should also include the incorporation of management control systems and RM activities (Bracci et al. 2021; Rana, Wickramasinghe, and Bracci 2019). It also involves integrating RM with information technology management systems, such as data collection and software, to monitor risk (Rubino and Vitolla 2014). Several authors emphasize the central role of management control systems in assessing and managing risks

in organizational processes (Kominis et al. 2021; Mahama et al. 2020; Vasileios and Favotto 2021). Furthermore, internal control systems make it possible to link RM with an organization's strategy and objectives as well as ensure the deployment of effective RM practices (Mahama et al. 2020).

Table 1 presents the analytical framework derived from the literature, and it summarizes the dimensions and analytical focus that guide the analysis.

3 | Methods

To determine the regulatory similarities and divergences in the RM of the central governments of the three largest economies in the EU—France, Germany, and Italy—this study relies on a detailed review of secondary data sources (Moore 2018). The dimensions outlined in Table 1 are used to analyze the regulatory context, including the laws, regulations, guidelines, and recommendations, as well as the reports and published case studies that shed light on RM practices.

3.1 | Unit of Analysis

France, Germany, and Italy are the largest countries in Europe and are also often regarded as key players in the EU, significantly impacting its policies and regulations. Their diverse administrative traditions and structures, all within a rule-of-law culture (Kuhlmann and Wollmann 2019; Ongaro 2010), present a unique opportunity to examine the dynamics of RM regulatory frameworks in a broader European context. Our study focuses specifically on the central government level in each of the countries as defined by Kuhlmann and Wollmann (2014) and bases the analysis on laws, regulations, guidelines, and recommendations relevant to this level. Additionally, we consider reports and published case studies that shed light on RM practices in central ministries, agencies, and other central authorities.

France has a Napoleonic administrative tradition, which translates to a unitary and centralized state in which law and norms are prevalent in public action (Kuhlmann and Wollmann 2019; Ongaro 2010). The central government is organized into various ministries (13 in 2024), each responsible for specific areas of public policy. However, several reforms have transformed the French administration, such as the decentralization laws that were passed in the 1980s and the NPM-inspired reforms enacted in the 2010s. They also led to a managerialist culture through changes that aimed to develop RM practices within the state and its ministries (Boullanger 2013).

Conversely, Germany is a federal parliamentary republic, with its laws and key institutions of state being grounded in a Basic Law (*Grundgesetz*). The German federal administration is significantly smaller in size than its other governmental levels, and the division of responsibilities between its different state levels (i.e., *Bund* and *Länder*) is a special feature of the country's administrative system (Kuhlmann et al. 2021). Germany's federal government is composed of various federal ministries, each of them being led by a federal minister responsible for specific policy fields. Alongside 15 ministries (2024), there are 91 federal agencies (2022), with the

TABLE 1 | Framework for the cross-country analysis of public sector risk management (RM) dimensions.

RM dimensions	Characteristics	Analytical approach	Relevant studies
1. Risk types	<ul style="list-style-type: none"> – Financial risks – Non-financial risks – Contextual risks 	<i>Examine the types of risks being considered to gain insights into the formal priorities of central governments</i>	Ferry and Eckersley (2019), Mahama et al. (2020), Narayan and Kommunuri (2021), Vasileios and Favotto (2021), Warren (2019)
2. Risk perception	<ul style="list-style-type: none"> – Risk as threat – Risk as opportunity 	<i>Examine how regulatory frameworks address risk perception (as threat and/or opportunity), as this influences organizational practices and approaches</i>	Barrett (2019), Azim and Nahar (2021), Gong, Vesty, and Subramaniam (2022), Narayan and Kommunuri (2021)
3. RM drivers	<ul style="list-style-type: none"> – Coercive pressure – Normative pressure – Mimetic pressure 	<i>Analyze coercive, normative, and mimetic institutional pressures to contextualize the primary influences and their implications for risk strategies</i>	Azim and Nahar (2021), Carlsson-Wall et al. (2019)
4. RM design	<ul style="list-style-type: none"> – Standardized (rule-based) – Flexible (principle-based) 	<i>Analyze the presence of and balance between standardized and flexible approaches to identify the adaptability of RM frameworks</i>	Bracci et al. (2021), Carlsson-Wall et al. (2019), COSO (2013), Flemig, Osborne, and Kinder (2016), Kominis et al. (2021), Mahama et al. (2020), Palermo (2014), Rana, Hoque, and Jacobs (2018), Rubino and Vitolla (2014), Vasileios and Favotto (2021)
5. Actors' roles and responsibilities	<ul style="list-style-type: none"> – No clear roles and responsibilities – Separate strategic and operational levels – Joint (ERM-type) strategic and operational levels – Inter-organizational level 	<i>Assess the clarity and depth of roles as well as inter-organizational collaboration to determine where accountability lies and actors' levels of engagement in managing risk</i>	Barrett (2019), Kominis et al. (2021), Mahama et al. (2020), Vasileios and Favotto (2021)
6. RM integration	<ul style="list-style-type: none"> – Non-integrated – Integrated (i.e., the RM system integrated into the management system) 	<i>Assess the requirements or recommendations in place that address the integration of RM processes and routines into wider management processes and systems</i>	Bracci et al. (2021), COSO (2013), Flemig, Osborne, and Kinder (2016), Kominis et al. (2021), Mahama et al. (2020), Palermo (2014), Rana, Wickramasinghe, and Bracci (2019), Rubino and Vitolla (2014), Vasileios and Favotto (2021)

latter employing over 90% of the federal workforce and differing widely in their mandates and tasks (Fleischer 2021). This variety is also evident in the development of RM practices at the federal level (Hirsch et al. 2020). Moreover, in 2017, the Federal Audit Office (FAO) introduced a general guideline on RM.

Italy also belongs to the Napoleonic administrative tradition. However, significant devolution processes have modified this state's unitary organization (Ongaro 2010), and the privatization of many public services has resulted in the establishment of independent administrative authorities that regulate the privatized sectors (Kuhlmann and Wollmann 2019). Italy's administrative structure at the central level is characterized by several ministries (15 in 2024), each overseeing or being responsible for

specific policy areas. Further diversifying the administrative landscape, these units are complemented by a variety of specialized national agencies (11) and independent administrative authorities (19). Even though performance management and accountability have gained importance since the end of the 20th century (Caperchione and Pezzani 2000), RM is still underrated and underdeveloped in Italian public organizations (Anessi-Pessina et al. 2020; EC 2014).

3.2 | Data Collection and Analysis

We employed a diversified research strategy, relying on various types of secondary data, and applied stringent selection criteria

to ensure a balanced and representative compilation of documents, providing a comprehensive basis for our analysis (see the Appendix section):

- Laws, decrees, and circulars as well as other regulations that define the obligations of administrations in the fields of internal control and audit and RM;
- Reports from audit institutions that set out the guidelines and good practices for RM and internal control;
- Assessment reports and published case studies that provide a critical view of the administrations' practices in terms of internal control as well as audit and RM practices; and
- Internal documents that illustrate how the administrations have implemented internal control as well as audit and RM practices and tools.

To ensure the authority and thus reliability of the secondary data, only official documents from institutional actors that are identified as competent in the field of internal control, audit, and RM (e.g., documents from central ministries, audit institutions, or clearly identified public organizations) are used (Moore 2018). Despite considering alternative sources, such as expert interviews, our analysis primarily relied on these documents due to the defined scope of our study. To gather reports, published case studies, and implementation data, we searched for documents about the central government level and their units in each of the countries related to the following themes: “risk management,” “internal control,” “financial control,” “internal audit,” “external audit,” and “COSO.” Moreover, we extended our research to include academic databases, specifically searching for publications related to case studies or implementation studies concerning the respective government level and units. Notably, press releases and similar materials were intentionally excluded from our analysis to maintain a focus on formalized, institutional documentation. In sum, the gathering of these documents was organized using a mix of online searches and requests to key actors, such as auditors, key representatives of auditing associations, and risk managers. A list of the documents used is available in the Appendix section.

On the basis of the developed framework, a comparative thematic analysis of the documents was conducted to examine the RM landscapes of France, Germany, and Italy (Bowen 2009; Fereday and Muir-Cochrane 2006). As the documents vary in form and content, the dimensions helped ensure comparability across the countries (Moore 2018), with each allowing to focus on a specific aspect.

4 | Results

4.1 | France

4.1.1 | Risk Types

In France, two types of risks are identified: financial and non-financial, the latter being referred to as “business risks.” The implementation of control systems for these risks is mandated by several regulations, including Decree No. 2011-775 of June

28, 2011 on internal audit within the administration. Since 2011, ministries are required to establish a Ministerial Internal Audit Committee and a Ministerial Internal Audit Mission, typically conducted by the Inspectorates General. The Secretaries General are responsible for implementing risk control systems under the supervision of a controller from the Ministry of Finance. However, financial and non-financial risks are managed by different control systems and overseen by different institutions.

4.1.2 | Risk Perception

Risks are generally seen as a threat to be eliminated or reduced through the implementation of control activities. For example, in the 2018 decree on financial internal control, financial risks are defined as “risks likely to compromise the achievement of the objectives of sustainability and quality of accounting” (p. 7) that must be prevented and controlled. Therefore, RM is conducted through a compliance-driven approach. The ministries and their departments comply with the regulations and pressure from the supervisory authorities, especially the Ministry of Finance.

4.1.3 | RM Drivers

Administrations are developing financial RM systems because they are forced to do so by coercive pressures. Indeed, the 2011 decree on internal audit and the 2018 decree on internal financial control mandate all ministries to set up internal control systems and departments that are dedicated to the implementation and control of RM systems. Moreover, reforms such as the introduction of accrual accounting based on the Public Finance Act (*la loi organique relative aux lois de finances*), which requires risk analysis for asset impairment, have inadvertently encouraged the development of RM within the public administration. In addition, the Ministry of Finance and the Court of Auditors exert normative pressure by encouraging public players to develop their internal control systems.

4.1.4 | RM Design

The authorities require RM systems to comply with international standards both for financial and non-financial internal control (e.g., the 2018 decree for internal financial control refers explicitly to the COSO II model). These tools must be updated yearly and voted on by the Ministerial Risk Management Committee. For financial risks, numerous regulations (e.g., Decree No. 2012-1246 of November 7, 2012 on public budgetary and accounting management and order of December 18, 2018 on the inter-ministerial reference framework for financial internal control applicable to the State's budgetary and accounting internal controls) mandate the implementation of RM systems. Ministries (and their departments) must comply with the guidance provided by the Ministry of Finance and its various departments in terms of identifying and assessing financial risks. The Ministry of Finance intervenes either directly through its officials identifying and assessing the accounting risks of the organizations they control or indirectly through the annual publication of budgetary risks to which other ministries must comply. The identification and assessment of

financial risks are conducted through mandatory risk mapping and according to criteria imposed by the regulations (e.g., order of December 18, 2018 on the inter-ministerial reference framework for internal financial control applicable to the State's internal budgetary and accounting controls), which classify financial risks according to their probability of occurrence and potential impact.

In terms of non-financial risks, each ministry is responsible for implementing its own risk identification and assessment processes. As there are no predefined categories of non-financial risks, there is a wide range of potential non-financial risks identified by different ministries (and their departments) depending on the nature of their tasks. However, the Internal Audit Harmonisation Committee (IAHC) encourages ministries to use standardized risks to make the approaches more visible (e.g., departmental governance; production, application, and compliance with standards; reporting, processing, and distribution of information; and protection of the population). The IAHC coordinates the internal control and audit practices developed by the ministries by regularly convening the heads of ministerial internal control and audit as well as by producing guidelines and best practices. Although not mandatory, departments follow the IAHC recommendations and use risk maps to identify and assess their non-financial risks, which are assessed according to two criteria: (1) their probability of occurrence and (2) their potential impact.

4.1.5 | Actors' Roles and Responsibilities

RM systems are mainly concerned with the strategic level of each ministry and its upper management, including the Secretary General, the Director of Finance, and the most senior heads of ministerial departments. The dissemination of these processes to the lower levels of the organization remains at the discretion of each ministry and typically varies greatly among them. Therefore, implementing these risk-control systems remains the prerogative of top management, and practices are rarely shared with and disseminated to middle and operational managers. The Departmental Internal Audit Missions (generally the General Inspectorates) then carry out audits in which the identified risks are satisfactorily controlled. These audits mainly consist of verifying processes' compliance with the regulations in force (particularly in terms of financial and personnel management).

4.1.6 | RM Integration

The RM systems implemented in the ministries are based on standardized processes according to well-defined steps (i.e., identification and assessment of risks; identification and implementation of control actions; and monitoring) in line with COSO II recommendations about RM at the strategic level and the inclusion of RM activities in operational and decision-making processes (COSO 2004). However, the integration of RM systems into other more comprehensive performance management systems is not addressed, and as such, they are additions to a package of control systems.

4.2 | Germany

4.2.1 | Risk Types

Regulations at the federal level in Germany are mainly oriented toward identifying and managing risks related to corruption and fraud, as they require all federal units to regularly identify the areas that are particularly susceptible to corruption, carry out risk analyses, and take steps to manage and mitigate the identified risk (e.g., through changes in organizational structure or personnel allocation). In addition, since 2005, risk assessments are also required in the context of mandatory value-for-money assessments. However, apart from these specific requirements, Germany has no comprehensive legal framework governing RM practices at the federal level (see also EC 2014). A report by the German FAO found that there was no uniform understanding of risk and RM across ministries and suggested that, in many cases, the authorities were not taking a comprehensive approach to RM that went beyond the legal requirements. To address this issue, the FAO developed and advocated a uniform RM standard that is based on the previous version of the IIA Three Lines of Defense Model, which identifies different risk fields, including strategic, operational, regulatory, reputational, and financial risks. This range of risk fields is also seen in RM approaches to federal units, for which publicly accessible records, reports, and published case studies are available (Hirsch et al. 2020; Motel and Richter 2016). Therefore, although no mandatory requirements for federal units' assessments of various risk types exist in principle, some organizations have chosen to embrace a broader spectrum.

4.2.2 | Risk Perception

The FAO (2017) guidelines that emphasize the focus on defending an organization against risks that could have a potentially negative impact on achieving its objectives alongside regulations that focus on corruption and value-for-money assessments have a prevailing negative risk perception. This negative focus is also evident in units that implement RM systems that primarily aim to identify and mitigate the negative impacts of risks rather than exploit opportunities (Hirsch et al. 2020; Motel and Richter 2016).

4.2.3 | RM Drivers

Institutional pressures, such as normative and coercive pressures, are potential drivers of RM implementation. For example, regulations related to the identification, assessment, and management of corruption and value-for-money risks can be viewed as coercive pressure, whereas the FAO's recommendation can be seen as normative pressure as it encourages organizations to follow or use its guidelines, which are derived from international professional standards.

4.2.4 | RM Design

Regulations relating to the identification, assessment, and management of corruption and value-for-money assessments require specific procedures to be followed. The implementation of the

FAO's RM framework on non-financial risks is not mandatory, as this model aims to facilitate the authorities' entry into systematic RM and the subsequent design of an effective system for the internal control of activities. It has been adapted to the specific characteristics of the German federal administration to make it more understandable and easier to use (e.g., by providing a matrix that links control functions and instruments with risks). Regardless of this recommendation, some subunits of ministries and agencies started to implement RM systems several years ago. Each unit started this implementation for different reasons and embarked on its own paths in terms of framework, subject, methods, impact, and integration (Hirsch et al. 2020; Motel and Richter 2016). In this regard, the Federal Employment Office has also increasingly aligned itself with the COSO framework in recent years.

4.2.5 | Actors' Roles and Responsibilities

Regulations related to the risks associated with corruption and value-for-money assessments assign clear and specific responsibilities for risk assessments to particular individuals, such as heads of departments or budget officials. Following the Three Lines of Defense Model, the FAO (2017) has adopted an actor-centric approach to RM by emphasizing the importance of different lines of defense across organizational levels and functions to manage risks, with each line having well-defined roles and responsibilities. Finally, the information provided on the implementation of RM in federal units shows the dynamic nature of RM practices as the roles, responsibilities, and focus of risk assessment continue to evolve. For example, some units have assigned clear responsibilities to different actors according to the different RM phases throughout all levels of the organization. In others, actors' roles and responsibilities are still evolving, and the focus is more specific (Hirsch et al. 2020; Motel and Richter 2016).

4.2.6 | RM Integration

RM-related mandatory rules are varied as they focus on different types of risk. From a formal standpoint, the FAO guideline provides a holistic approach that encompasses a wide spectrum of risks and actors that are linked to different and wider control instruments and functions. However, information about implementing the FAO guideline is not available. Some case evidence indicates that RM continues to evolve and, in some cases, has been increasingly integrated into the federal units' organizational structures and procedures (Hirsch et al. 2020). Nonetheless, it is important to acknowledge that this set of units only represents a portion of all federal units. Therefore, although the FAO's model is cohesive in principle, in practice, the integration of RM may vary across federal units.

4.3 | Italy

4.3.1 | Risk Types

The main risks that are considered and monitored within Italian public administration are related to corruption, money laundering, transparency, and health and safety at work. Different risks

are handled under different control systems and are overseen by different institutions. In 2019, the National Anti-Corruption Authority (ANAC) outlined 12 corruption-related crimes in public administrations, from different forms of illicit money appropriations to violations of public duties. Thus, the focus is on financial risks, but operational risks are also considered in terms of safeguarding the health and safety of human resources and, to a lesser extent, reputational risks as far as transparency is concerned.

4.3.2 | Risk Perception

Overall, risks are perceived as a threat and are dealt with at a compliance level according to formal prescriptions and regulations that focus on identifying and reducing the sources and negative effects of risks rather than on seizing opportunities. Following the prescription of Law 190/2012 and Legislative Decree 33/2013 and as mentioned above, the main risks that need to be identified, assessed, and monitored are those related to corruption, money laundering, transparency, and health and safety at work. Ministries and central government agencies, as well as institutions at all levels of government, must also handle the oversight and pressure of supervisory authorities, which adds to the negative perception of risk.

4.3.3 | RM Drivers

Control mechanisms are formal, derived from national standards, and implemented mostly according to institutional demands. Hence, the pressures that are recognized as key factors in the implementation of RM are mainly coercive, but some are normative. In particular, Legislative Decree 150/2009, which instituted one of the key performance management reforms for Italy's public organizations, mandated the development of an independent supervisory body (*Organismo Indipendente di Valutazione* [OIV]) for every public sector organization, which is a body that is responsible for performance management and is thus responsible for correctly applying the guidelines, methods, and instruments provided by ANAC and for promptly reporting detected risks to the relevant governance and administrative bodies, such as higher governing institutions (e.g., relevant ministers in case of ministerial departments or agencies and parliament in the case of ministries), the Court of Auditors, the Inspectorate for the Civil Service, and, if necessary, ANAC itself. Hence, RM is first shaped by norms and regulations, but it is also influenced by the institutions that pursue and enforce it in Italy's public administrations.

4.3.4 | RM Design

RM has been institutionalized in some national decrees through key structures and procedures. Starting with Legislative Decree 150/2009, there have been numerous regulatory interventions in terms of internal controls and RM, which have resulted in a complex and uneven picture in terms of the plurality of actors, the multiplicity of controls to be carried out, and the large number of documents to be produced (Peta 2016). There is little room for

vernacular RM systems that are developed within single public administrations, even though some more advanced national agencies such as the National Social Security Institute (INPS) or the National Institute of Statistics (ISTAT) have developed their own systems for mapping and assessing risks, which are usually placed within a special internal audit unit (Hinna, Scarozza, and Rotundi 2018).

4.3.5 | Actors' Roles and Responsibilities

Italian legislation clearly identifies three actors that are responsible for RM and have to be present at all levels: the OIV, the Head of Corruption Prevention and Transparency (*Responsabile della Prevenzione della Corruzione e della Trasparenza* [RPCT]), and the Prevention and Protection Service Manager (*Responsabile Servizio Prevenzione e Protezione* [RSPP]). As described above, the OIV is responsible for performance management and, as such, has more of an oversight role within its organization. The RCPT was established by Law 190/2012 and Legislative Decree 33/2013, which mandated the appointment of a manager within each administration who is entrusted with formalizing and monitoring organizational activities to prevent corruption and ensure transparency. Similarly, Legislative Decree 81 from 2008 introduced the RSPP, which is charged with identifying, assessing, and monitoring internal risks in terms of health and safety at work in both private and public organizations. All public entities at all government levels have to comply with these requirements, which require that the ministers nominate an independent OIV, RCPT, and RSPP from among the top-level officials within their respective ministries. Different from the OIV, the RPCT and the RSPP do not concern themselves with strategic issues but rather with operational ones. All three bodies are mainly concerned with their own organizations as they do not have the mandate to extend themselves beyond that, and they rarely consider inter-organizational issues, which has the consequence of effective RM not being achieved as public policies and services often involve more than one public administration unit. ANAC, the Courts of Auditors, and the Inspectorate for the Civil Service could play a more inter-organizational approach, but they take on the role of providing oversight that is mainly focused on single organizations.

4.3.6 | RM Integration

RM has not generally reached a significant level of integration within Italian public administrations, as there are no set rules or guidelines regarding RM and no practices or norms about risk identification or risk assessment, let alone risk treatment or coordination with other internal control systems. For example, anti-corruption plans are used diagnostically to detect and assess risks at an operational level and suggest possible solutions, but they are not part of internal controls, and there is no requirement for RM to inform planning or be included in reporting government activities. On the contrary, RM often involves obligations that are addressed in such a formal way that they burden organizations, sometimes hindering their work, and even compromising the clarity and efficiency of the same control system (Proietti 2020).

Table 2 summarizes the main aspects of each country and forms the basis of the following comparative discussion.

5 | Discussion

This section first presents an overview of the findings from the comparative analysis, with each dimension being a focal point, after which the cross-country observations are synthesized in a discussion of the evolution and broader patterns that emerged from this analysis.

5.1 | The Comparative Analysis of the RM Dimensions

5.1.1 | Risk Types

In line with previous studies (Hay 1993; Lee 1971), a focus on mitigating financial risks is central in all three countries, but there are nuances in their approaches (see Table 2): Germany and Italy strongly emphasize the mitigation of risks related to fraud, corruption, and waste in the context of value-for-money assessments, whereas France captures budgetary and accounting risks in a systematic way. It is important to note that all of these practices are anchored in mandatory regulations in all three countries. Moreover, France in 2011 and Germany in 2019 have also included broader non-financial risks in their frameworks, albeit in different forms and with different binding characters. In Italy, the non-financial risks mainly concern the operational risks related to transparency as well as the health and safety of workers, whereas corruption is considered mainly for its financial implications and not under other non-financial perspectives, such as reputational considerations. Finally, contextual risks are not explicitly addressed in the broader risk frameworks, which is not surprising given their constantly evolving nature.

5.1.2 | Risk Perceptions

In all three countries, risk is perceived as a threat to be minimized rather than an opportunity for value creation or performance improvement. Indeed, it is defined as such in the documents that provide the basis and guidelines for RM practices. Although it might be plausible to assume that a more balanced approach toward risk may only become visible at the organizational level, also case study evidence from Germany suggests a prevailing negative perception of risk. This is in line with recent studies that show that administrations still struggle to recognize that risk can also present opportunities for improvement (Barrett 2019; Gong, Vesty, and Subramaniam 2022).

5.1.3 | RM Drivers

In all three countries, the adoption of RM is influenced by coercive and normative pressures (Azim and Nahar 2021; Carlsson-Wall et al. 2019), although the nature and degree of these pressures vary. For example, the driving forces behind the adoption of RM systems in France are overwhelmingly coercive, as the 2011 and 2018 decrees mandate ministries to adopt internal control

TABLE 2 | The comparative assessment of the risk management (RM) regulations in France, Germany, and Italy.

RM dimensions	France	Germany	Italy
1. Risk types	<ul style="list-style-type: none"> – Financial risks: budgetary, accounting – Non-financial risks (“business risks”) – Contextual risk: not explicitly addressed 	<ul style="list-style-type: none"> – Financial risks: fraud, corruption, waste – Non-financial risks: e.g., strategic, operational, regulatory, reputational – Contextual risk: not explicitly addressed 	<ul style="list-style-type: none"> – Financial risks: fraud, corruption – Non-financial risks: transparency, health, and safety – Contextual risk: not explicitly addressed
2. Risk perception	<ul style="list-style-type: none"> – Risk as a threat 	<ul style="list-style-type: none"> – Risk as a threat 	<ul style="list-style-type: none"> – Risk as a threat
3. RM drivers	<ul style="list-style-type: none"> – Coercive: dominant for financial and non-financial – Normative: present in implementation guidance (IAHC, Court of Auditors) 	<ul style="list-style-type: none"> – Coercive: dominant for financial risks (regulations on corruption and value-for-money) – Normative: present for non-financial risks (e.g., FAO) 	<ul style="list-style-type: none"> – Coercive: dominant – Normative: limited presence (e.g., ANAC)
4. RM design	<ul style="list-style-type: none"> – Rule-based: financial – Principle-based: financial and non-financial, with COSO being used as the international framework 	<ul style="list-style-type: none"> – Rule-based: financial – Principle-based: non-financial, with FAO’s model being oriented toward IIA 3LoD framework 	<ul style="list-style-type: none"> – Rule based: financial
5. Actors’ roles /responsibilities	<ul style="list-style-type: none"> – Separate strategic and operational levels: financial – Mainly strategic level, with operational actors rarely being involved: non-financial 	<ul style="list-style-type: none"> – Separate strategic and operational levels: financial – Joint (ERM-type) strategic and operational levels: non-financial 	<ul style="list-style-type: none"> – Separate strategic and operational levels: financial – Mainly operational, with strategic actors rarely being involved: non-financial
6. RM integration	<ul style="list-style-type: none"> – Partly integrated: The COSO II model is cohesive in principle but has no link to broader management systems 	<ul style="list-style-type: none"> – Partly integrated: FAO’s model is cohesive in principle. Case study units show that the integration of RM with other systems varies 	<ul style="list-style-type: none"> – Non-integrated: It is in the early stages, with a focus on diagnosing fraud and corruption, but there is no integration with controls

mechanisms. However, there is an element of normative pressure, which is evident in the variety of actors who provide guidelines and advocate for refining internal control systems. Conversely, the German context presents a blend of coercive and normative pressures, in which, while regulations governing corruption and value-for-money risks can be perceived as direct mandates, the FAO’s recommendations that are anchored in international professional standards and comprise a variety of risks suggest a normative pressure. Contrarily, Italy’s RM framework is primarily shaped by a complex web of regulations, which is indicative of significant coercive pressure. Nevertheless, bodies such as ANAC and the Court of Auditors highlight the normative pressure in this context. The nature of these two pressures across the three countries appears to be intertwined with the types of risk being addressed, as, for financial risk, there is a clear tendency toward coercive pressures, which are likely to drive compliance-driven strategies at the organizational level. These strategies are typically aimed at avoiding adverse consequences and are therefore in line with the EC’s (2014) internal control framework. On the other hand, for non-financial risk, the type of pressure differs across countries.

5.1.4 | RM Design

The RM designs exist on a spectrum between standardization and flexibility, denoting rule- and principle-based approaches, respectively. Financial risk across the three countries is predominantly managed using rule-based approaches, which is potentially due to the strong need for uniformity and compliance in this regard. However, in terms of non-financial risk, public organizations in France and Germany are granted greater flexibility, allowing the tailoring of RM practices to their specific challenges, regardless of whether they are situated in a mandatory or advisory context. It is also noteworthy that both France and Germany refer to international frameworks; in that France leans toward the COSO framework, whereas Germany recommends an adapted version of the Three Lines of Defense Model from the IIA. This orientation is indicative of a move toward principles-based approaches, which emphasize flexibility within high-level guidelines. In Germany, federal units’ practical experiences suggest the emergence of varied approaches, with some increasingly orienting themselves toward international standards (e.g., Germany’s employment agency). In France, most of the departments follow the

internal recommendations of the internal audit harmonization unit regarding the management of non-financial risk. Thus, these developments indicate that France and Germany are attempting to find a balance between rule- and principle-based approaches, thereby recognizing the need for adaptability in the face of unique and varied challenges at the ground level (Mahama et al. 2020), whereas Italy has adopted a predominant standardized approach.

5.1.5 | Actors' Roles and Responsibilities

The three countries assign RM roles and responsibilities to different actors within public organizations, and there is also a distinction between financial and non-financial risks in this context. Despite varying structures, all three countries define clear roles and responsibilities for financial risk, differentiating between operating and strategic roles according to EU requirements (EC 2014). However, there is a more diversified approach in terms of non-financial risk in the three countries. In France, due to the traditional centralization of power and concentration of decision-making in the highest levels of management, the implementation of RM systems mainly concerns those in the strategic levels and upper management of ministries, whereas operational actors are rarely involved in these processes. On the other hand, in Italy, the actors in charge of RM systems focus mainly on operational aspects of specific risks such as health and safety, whereas in Germany, the Three Lines of Defense Model, which is actor-centric, distributes responsibilities across all organizational levels in principle. However, throughout these countries, inter-organizational collaboration is not explicitly addressed, which may limit their effectiveness in dealing with emerging interconnected and multifaceted (i.e., wicked) challenges (Feduzi, Runde, and Schwarz 2022; Kominis et al. 2021; Warren 2019).

5.1.6 | RM Integration

The comparison of the RM systems in France, Germany, and Italy revealed different approaches to and varying levels of maturity and integration in these systems. France has a structured approach to internal control based on the COSO II model but lags behind in terms of linking RM processes to broader management systems. In contrast, since 2017, Germany has pursued an advanced and holistic approach in principle through the FAO guideline that was derived from the Three Lines of Defense Model. Nevertheless, the current regulatory framework offers a wide range of possibilities regarding the level of integration across federal units. Conversely, Italy appears to be at an early stage of RM implementation as there are no overarching RM guidelines, and the tools currently in place primarily focus on diagnosing and assessing fraud and corruption risks without the integration of internal controls.

Therefore, the findings of the comparison of these three European countries echo those of previous studies (ANAO 2017; Rana, Wickramasinghe, and Bracci 2019) by illustrating that these countries' RM processes largely operate in isolation rather than being intertwined with broader management control systems

(Mahama et al. 2020; Vasileios and Favotto 2021). The opportunity to integrate RM into other processes and systems is thus not fully exploited, with a cultural shift possibly being required to facilitate this change.

5.2 | Synthesizing the Cross-Country Observations

The findings indicate that the three European countries present a diverse landscape of RM frameworks that have different focuses, drivers, and levels of integration. In terms of the range of risk types covered, France stands out for its comprehensive coverage of both financial and non-financial (i.e., business) risks, thereby demonstrating a broad understanding of the potential challenges its public organizations' face. Germany also covers a wide range, although it is not as exhaustive as France's as it only mandates the assessment of financial risks. Both France and Germany have introduced non-financial risk types with an international perspective through the use of well-established frameworks. On the other hand, Italy's focus is narrower as it emphasizes mainly financial and some non-financial operational risks, using a predominant rule-based approach. When it comes to the drivers of RM, both France and Germany show flexibility as they strike a balance between coercive and normative pressures. However, Italy tends to exert coercive pressure, which suggests a primarily compliance-oriented RM culture, even though this is also present in the other two countries. Moreover, the regulatory frameworks clearly distinguish between financial and non-financial risks, which also influence the RM drivers and designs as well as actors' roles and responsibilities.

As the design of RM serves as the foundation upon which organizations build their strategies for identifying, analyzing, and managing risk, the choice between rule-based and principle-based approaches fundamentally affects how an organization interacts with and adapts to the changing risk landscape (Mahama et al. 2020). In this respect, France and Germany show adaptability by seeking a balance between rule- and principle-based approaches in terms of categorizing financial and non-financial risks. In contrast, Italy's predominant reliance on a rules-based approach may limit its responsiveness to dynamic risk environments, although it must be noted that Italy generally fails to recognize broader non-financial risks in its regulatory framework, which may explain this dominance. In essence, although rule-based approaches provide a strong foundation and ensure the necessary compliance, complementing them with principle-based strategies might be useful for remaining adaptable and resilient in the face of steadily evolving risks (Power 2004, 2009).

The countries' delineation of actors' roles and responsibilities further differentiates them: Germany's approach is, in principle, adaptive and inclusive; France's strategy has a particular focus on strategic actors; and Italy remains more focused on operational roles and specific risk areas. Thus, there is an apparent lack of focus on inter-organizational cooperation, which, in the face of the complex and interrelated risks, could be detrimental to the overall effectiveness of RM (Kominis et al. 2021).

In terms of RM integration, France, which started these processes in 2011, has the most comprehensive and mandatory

TABLE 3 | Cross-country analysis of public sector risk management (RM) dimensions.

Analytical dimension	Comparative findings
Risk types	The diversity in risk type coverage reflects varying RM priorities. Although France and Germany show broader approaches suggesting a more holistic risk perspective, Italy exerts a narrower financial risk-oriented focus together with an attention to health and safety at work. The analysis highlights a general oversight of contextual risks across the countries studied (Mahama et al. 2020; Warren 2019)
Risk perception	The universal perception of risk as a threat across all countries highlights a traditional RM orientation. This commonality suggests an area for a paradigm shift toward recognizing risks as opportunities, promoting a more dynamic and forward-thinking RM culture (Azim and Nahar 2021; Barrett 2019; Gong, Vesty, and Subramaniam 2022)
RM drivers	France and Germany exhibit a balanced use of coercive and normative pressures to drive RM practices, indicating a more flexible and potentially more effective approach compared to Italy's reliance on coercive pressures underscoring a compliance-oriented approach (Azim and Nahar 2021; Carlsson-Wall et al. 2019)
RM design	The interplay between rule-based and principle-based approaches in France and Germany points to an effort to maintain adaptability in RM. Italy's preference for rule-based approaches may limit its responsiveness to evolving risk landscapes (Mahama et al. 2020; Power 2004, 2009)
Actors' roles and responsibilities	The variation in focus from strategic to operational roles across countries points to different implementation models of RM. The lack of focus on inter-organizational cooperation shows room for improvement in fostering collaborative RM efforts in all countries (Kominis et al. 2021)
RM integration	The approach to RM integration into broader management systems varies, with France and Germany (in principle) showing more comprehensive, but still limited, approaches in their regulatory landscapes compared to Italy (Bracci et al. 2021)

approach to risk that covers both financial and non-financial risk types, and it is oriented toward COSO, which is an internationally recognized model. However, it lacks comprehensive integration as the processes are carried out in parallel and are controlled by different actors. Germany, which also has a broad risk perspective, derives its framework, introduced in 2017, from the actor-centric and integrated IIA's Three Lines of Defense Model. However, due to its recommendatory nature, this model can be implemented inconsistently. Lastly, Italy is in the early stages of its RM evolution, which emphasizes rules-based strategies and limited recognition of non-financial risks, which may hinder Italy's ability to adapt to changing risk landscapes.

Despite each country's nuances, there is a common theme: There is a prevailing perspective in which risk is viewed primarily as a threat, indicating the need to move beyond compliance-oriented approaches to ensure that public actors' risk perceptions are more balanced in terms of seeing risks not only as threats but also as opportunities (Azim and Nahar 2021; Barrett 2019; Gong, Vesty, and Subramaniam 2022). Such a shift also aligns with the latest adaptations in international internal control and RM frameworks, which highlight the potential of risks as catalysts for value creation (COSO 2017; IIA 2020). Table 3 synthesizes the findings.

In conclusion, although France, Germany, and Italy exhibit diverse RM approaches, common themes emerge that highlight the need for evolving toward more inclusive, flexible, and opportunity-oriented RM strategies. Embracing a balanced view of risks, leveraging both rule- and principle-based approaches, and fostering comprehensive integration with wider systems and

engagement across organizational levels stand out as pivotal areas for further developments.

6 | Conclusion

This study makes several contributions to the literature on RM in the public sector. First, an analytical framework was developed and applied to examine and compare the regulatory landscape across countries, which allowed for the identification and comparison of similarities and differences in a structured manner as well as the determination of the link between them and the main issues discussed in the literature. The literature-based analytical framework developed and applied comprises six main dimensions allowing to analyze and compare RM approaches in terms of (1) the types of risk included, (2) the perception of risks, (3) RM implementation drivers, (4) RM implementation design, (5) the roles and responsibilities of actors, and (6) RM integration with wider management systems. This framework's strength thus lies in its ability to systematically analyze and compare RM approaches across different regulatory contexts, providing a structured method to understand how various countries interpret and implement RM concepts. Although applied at the national level in this study, the framework also has the potential to be suitable for other countries, other government levels, as well as different organizational levels, offering a flexible tool for both researchers and practitioners to assess and enhance RM regulation and practices.

Second, our international comparison also contributes to the literature by showing how international guidelines are "endogenized" in different ways by the countries studied, thus addressing a gap

identified in a recent literature review (Bracci et al. 2021). Our study illustrates the phenomenon of path dependency (Christensen and Lægveid 2007), which leads national administrations to reinterpret international frameworks according to their history and administrative traditions. Indeed, the comparative analysis demonstrated that each country's approach varies despite being influenced by international developments. Although France and Germany have more balanced and adaptive RM frameworks, Italy's rule-centric strategy, combined with a nascent understanding of non-financial risks, suggests a potential need for greater adaptability and comprehensive risk perception. In all three countries, a risk-as-threat perspective prevails, which indicates a need for recognizing risks as potential opportunities in regulatory frameworks. The regulatory landscape may not only play a pivotal role in promoting all risk types but also in reshaping the risk perception of public actors, thus encouraging a more balanced perspective (Azim and Nahar 2021; Barrett 2019; Gong, Vesty, and Subramaniam 2022). Some scholars argue that regulations and rules should explicitly incorporate the concept of learning from risk and shift the prevailing negative perception of risk (Flemig, Osborne, and Kinder 2016). However, achieving this transformation necessitates addressing the social and cultural dimensions of RM (Mikes 2009). This also requires overcoming "blame-game" systems (Hood 2002) that lead to blame-avoidance strategies, which results in little room being left for individual exposure and flexible approaches to decision-making (Garlatti, Fedele, and Ianniello 2018).

Finally, it is also important to recognize that the observations herein focused primarily on a more tangible element—the regulatory framework—which, while crucial, is only one facet of a multi-dimensional landscape. In this regard, the study relied on an analysis of secondary data on three large European countries that share a rule-of-law culture (Kuhlmann and Wollmann 2019). The use of this secondary data has several limitations. First, even if common criteria have been used in the selection of documents, there may be differences in the type of documents studied from one country to another, which may affect the relevance of the comparisons. Second, there may be differences in the volume of documents available between countries where regulations and reports relating to RM and internal control are fairly numerous (France and Germany) and those where such documents are rarer (Italy), which can lead to differences in the nature and/or depth of analyses from one country to another. Third, although our approach allowed for the examination of the regulatory context of RM practices, the differences in these countries' actual RM implementations, the routines in their respective public organizations, or how the actors implement and use these systems were beyond the scope of this study. Therefore, future research could not only include a more diverse set of countries but also use empirical designs that incorporate both quantitative and qualitative methods to address these questions. Lastly, although our selection of RM dimensions is based on a thorough literature review, we acknowledge the possibility of excluding emerging or less-documented dimensions, highlighting an area for future research. Future studies could also further refine this framework by incorporating emerging risk types or adapting it to address sector-specific RM challenges. Finally, the potential impact of emerging technologies, tools, and techniques on RM practices in the public sector could be further explored.

Acknowledgments

Open access publishing facilitated by Universita degli Studi di Bologna, as part of the Wiley - CRUI-CARE agreement.

Disclosure

During the preparation of this work, the authors used GPT4 by Open AI, DeepL, and Grammarly to language edit the manuscript. After using these tools and services, the authors reviewed and edited the content as needed and took full responsibility for the content of the publication.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Sources are shown in the Appendix section.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.