# Rethinking the Guiding Significance of COSO-ERM for Enterprise Risk Management in the Post-epidemic Era

Jingxue Yuan<sup>1, a</sup>

<sup>1</sup>Guangzhou Institute of Technology, Guangzhou, Guangdong, 510800, China

a373530443@qq.com

# Abstract

Based on the perspective of management accounting, this paper compares and studies foreign enterprise risk management frameworks from the aspects of background, framework and content, including COSO enterprise risk management-integration framework (2017), through changes in COSO-ERM (2017) Carrying out a detailed interpretation, the development of comparative changes aims to draw on the experience of Western countries in making outstanding achievements in enterprise risk management (especially the ERM framework proposed by the COSO Committee), combined with my country's current new opportunities for deepening reform and development, trying to provide my country's Provide guidance for enterprise development and transformation. Especially in the context of the post-epidemic era, enterprise risk management is of great significance to the future development of enterprises. It is of great help to the implementation of enterprise strategies and the core competitiveness of enterprises.

# Keywords

COSO-ERM; Enterprise Risk Management(ERM).

# 1. The Background and Development of the COSO-ERM (2017) Framework

The "Internal Control-Integration Framework" issued by the COSO Committee in 1992 has been widely recognized around the world. However, as the global economy continues to change towards openness, dynamics and competitiveness, various factors affecting the realization of corporate goals have gradually increased. The external environment is complex and changeable, and the changes in the business environment of the company are getting worse. The main manifestations are as follows:

First of all, the global market is complex and changeable, and the number of risks faced by enterprises is constantly increasing. The original risk management system cannot fully adapt to the new risks that continue to emerge. The original risk management system is in urgent need of improvement and improvement in the face of various rapidly increasing risks faced by enterprises. At the same time, new technologies and methods provide technical support for risk management.

Secondly, the stakeholders of the enterprise put forward new requirements in the new internal and external environment. One is the expectations of investors for stable operations. The financial scandals and final bankruptcies of many large companies have prompted investors to turn to companies that pursue sound internal control, sound risk management, and stable operations. The effectiveness of risk management has become an important indicator of whether a company has investment value. Second, in order to reduce instability, the government and regulatory agencies have asked public interest entities to report on risk management, and have introduced relevant laws, regulations and regulatory policies on risk management, creating a good environment for consolidation of risk management from the perspective of legislation and supervision.

Thirdly, since the 21st century, a series of disasters, accidents and crises have turned people's attention to the field of risk management. Two-way management through reducing uncertainty and seizing opportunities has become the goal of current corporate strategy formulation. Committed to formulating a risk management plan that combines "integration and decentralization" to adapt to changes in internal and external environments.

In the above context, timely and effective implementation of enterprise risk management is imperative. In 2002, the Sarbanes-Oxley Act of the United States was promulgated, requiring public interest entities to pay attention to risk management; in 2004, the COSO committee promulgated the COSO-ERM (2004) to make up for the excessive focus on financial reporting in the "Internal Control-Integration Framework", the lack of attention to risks at the overall level.

# 2. Changes in COSO-ERM (2017)

It has been more than ten years since the 2004 version of the framework was released. In the past ten years, the complexity of risks has undergone major changes. Due to the continuous evolution of new environments and new technologies, new risks have also emerged in an endless stream. Under this premise, COSO launched the first revision of the risk management framework in 2014. The updated content of the new version mainly includes:

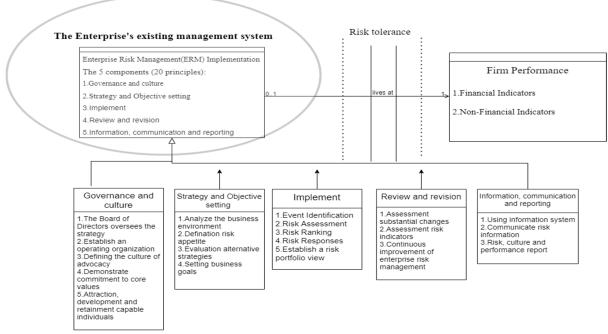
Changed the topic and presentation of the framework; applied the writing structure of elements and principles; simplified the definition of enterprise risk management; emphasized the correlation between risk and value; re-examined the focus of the enterprise risk management integration framework; inspection the position of culture in risk management has been improved; discussions on strategic related issues have been enhanced; the synergy between performance and enterprise risk management has been enhanced; it has demonstrated that enterprise risk management supports clearer decision-making; and has clarified enterprise risk management the relationship with internal control; optimized the concept of risk appetite and risk tolerance. The part that has not changed is that the "Enterprise Risk Management-Applied Technology" published in 2004 is retained, but the framework itself is updated, and risk management workers can still use the risk management-related tools and technologies issued in 2004.

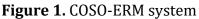
# 2.1. Title

First of all, the name of the official version of the framework and the draft for comments have changed, from Enterprise Risk Management-Aligning with Strategy and Performance to Enterprise Risk Management-Integrating with Strategy and Performance, from "Aligning" to "Integrating", although only change "A" word, but the meaning is quite different. The change of this word directly reflects the change of the core concept of the whole framework from the draft for comments to the official version. Comparing the full text of the two documents, you will find that the core of the content change is reflected the two words from "Aligning" to "Integrating" have different meanings. "Aligning" can mean collaboration, coordination, and consistency, etc., expressing that enterprise risk management should be coordinated with enterprise strategy and performance; "Integrating" means integration, conformation, etc., expressing enterprise risk management work and corporate strategy and performance are an organic and inseparable whole; a change of just one word repositions the enterprise risk management work, from being a seemingly independent work in coordination with strategy and performance to really abandoning itself integrate into the work of strategy and performance management. This change can actually describe the best practice of integrating risk management into corporate management and business that we have been advocating.

# 2.2. Five Elements and Basic Principles

The most obvious signs of changes in the five elements are "de-risking" and "de-controlling." None of the five elements contains the word "risk", and the content of "control activities" in the original framework has been deleted. The new framework no longer emphasizes risk content blindly, but integrates risk management content directly from the perspective of corporate management. Because ERM is a risk "management" framework, not just a risk "control" framework, the content related to "control" is left to the internal control framework. The enterprise governance and management elements from the perspective of risk are no longer blindly emphasized, but directly from the corporate governance and management. From the management perspective, it is proposed to embed the content of risk management, which lays the foundation for the true integration of risk management into governance and management. In addition, the "Risk in Execution" (Risk in Execution) is directly changed to "Performance", which makes the understanding more direct and avoids the difference in the understanding of "Risk in Execution" in different regions of the world. The official version changed the 23 basic principles of the five elements in the draft for comments to 20, because in the process of soliciting comments, some opinions expressed that the 23 principles are too many and some of the content is not very practical. Therefore, in governance and culture, two principles have been merged into one, focusing more on the manifestation of core values; at the same time, in terms of strategy and goal setting, the original principles 10 and 11 have been merged into one, that is, setting business goals; and finally, in terms of information, communication and reporting, the use of relevant information and the use of information systems have been combined into one. The new principles pay more attention to the application of information and technology in supporting enterprise risk management.





# 2.3. Changes in the Form of Presentation

The original "cube" has been changed to the current "spiral body". The mood of "integration" emphasized by the spiral body and the new framework is more appropriate, showing the relationship between risk management and management elements such as mission, vision, value, strategy, operation and performance.

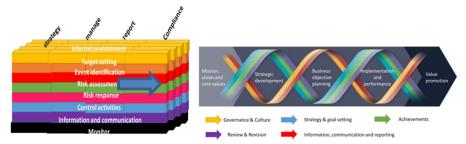


Figure 2. Changes for COSO framework

# 2.4. Changes in the Definition of Enterprise Risk Management

COSO-ERM (2004) defines enterprise risk management as: Comprehensive risk management is a continuous process. This process is the integrated management of various risks faced by the enterprise. All employees of the enterprise fully participate and implement it, and finally Ensure the realization of corporate strategic goals.

COSO-ERM (2017) defines enterprise risk management as: is closely related to strategy formulation and execution, a culture, ability and practice to manage risk in the process of creating, maintaining and realizing value.

COS-ERM (2004) emphasizes that risk management is a process, that is, policies, procedures, forms, and systems, while COS-ERM (2017) emphasizes that risk management is a culture, ability, and practice, which is related to value Creation and strategy are closely related.

#### 2.5. Changes in the Form of Risk Management

Compared with COSO-ERM (2004), COSO-ERM (2017) pays more attention to the specific process and implementation of enterprise risk management. It believes that in addition to internal control, enterprise risk management also includes strategy formulation, corporate governance and Grade. COSO-ERM (2017) believes that culture, ability and practice are the main forms of risk management, including the formulation and execution of strategies, which need to be fully integrated with strategy and performance. COSO-ERM (2017) believes that enterprise risk management is an important part of the organization's strategy and operations, rather than a separate task.

# 3. Changes in the Importance of Culture in Risk Management

The new ERM framework believes that culture plays an important role in enterprise risk management. The organization's ethics, expected behavior, and risk-related personnel are an important part of corporate culture. The internal connection between corporate culture and business environment shows the choice and implementation of corporate strategy.

# 4. Emphasize and Expand the Role of Risk Management at the Strategic Level

Compared with COSO-ERM (2017), COSO-ERM (2004) emphasizes the role of risk management at the strategic level. It focuses on strategy and risk regulations, and embeds risk management in the process of strategy formulation, selection and execution. Among them, the risks in the process of achieving the performance of the management strategy are highlighted.

# 5. The Synergy Between Risk Management and Performance Is Emphasized

The new framework focuses on clarifying the relationship between risk and performance, integrating the setting of business goals, achieving performance and risk management, and exploring how to identify and evaluate various risks that affect performance. By setting a tolerable performance fluctuation interval, it shows that changes in performance lead to changes in the risk status under certain goals, and at the same time emphasizes how risks affect the realization of strategic and business goals.

In summary, there should be a new understanding of risk. Risks are bidirectional, which may have a negative impact on strategy execution and goal realization, and may also bring opportunities. Risk management should be regarded as the core competitiveness, and companies need to build a risk management culture system. At the same time, risk management is an all-staff behavior and is everyone's responsibility. It should be involved no matter the level of organizational strategy formulation, the formulation of business unit objectives, or the level of daily operations.

# 6. Risk Performance Curve

In the new version of the enterprise risk management framework announced by the COSO Committee in September 2017, the biggest change is that risk management is no longer discussed in isolation, but is better integrated into enterprise management as a culture, capability and practice. To serve the enterprise to achieve its management goals at all levels. To better illustrate this integration, a "risk profile" is introduced and appears several times in the new framework to explain a curve that correlates risk and performance.

The following figure is the most basic COSO risk-performance curve. The horizontal axis represents Performance, and the vertical axis represents Risk. A blue curve draws an overview of the risks to be undertaken under different performance goals. The vertical purple line is the goal line, which refers to the size of the performance goal setting. The red horizontal line represents the subject's risk appetite, including a description of the type of risk and the amount of risk.

The intersection of the blue curve and the purple target line refers to the corresponding risk profile that needs to be undertaken under the given performance target; the intersection of the blue curve and the red risk preference line is the performance that can be achieved when the risk assumed reaches the risk preference. target; or when the performance target increases to a certain value, the corresponding risk assumed by the entity reaches the total amount of risk appetite.

If the subject's performance target is set at the X-axis performance value corresponding to the blue curve above risk appetite, that would be considered a risky and aggressive performance target.

In order to reflect the relationship between risk and performance, the concept of risk tolerance has been abandoned.

In order to better demonstrate the intimate relationship between risk and enterprise performance, COSO has also made great efforts to delete the concept of risk tolerance. You must know that this concept is deeply rooted in the field of risk management. In order to directly link risk and performance, COSO must save all that can be saved by "not letting middlemen make the difference", so the meaning of risk tolerance is integrated into risk appetite, and "acceptable performance" is enabled. "Range of volatility" as a new concept of tolerance (tolerance).

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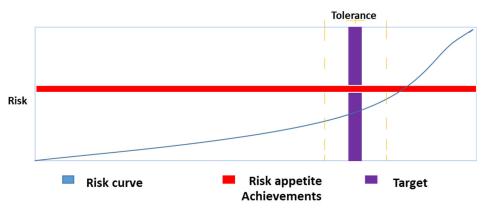


Figure 3. Risk Performance Curve

In the above figure, in the orange dotted line, the distance between the two points of intersection with the horizontal axis represents different performance values and represents the "acceptable performance fluctuation range", which is the original concept of "risk tolerance" direct manifestation.

# 7. Summarizing Uncertainty in ERM Implementation

Today the essence of risk is defined as uncertainty, covering Knight's unquantifiable parts. Traditionally, the two dimensions of probability and impact are used to measure the level of risk, but it is forgotten that uncertainty is the real master behind these two dimensions. The criterion for judging whether it constitutes a risk is to see whether there is uncertainty involved. As long as there is, it can be called a risk. In addition, today's risk assessment, just relying on the assessment of its probability of occurrence and degree of impact, can no longer satisfy the understanding of risk, and more analysis dimensions need to be added according to the needs of the environment. Risk assessment is a simple and complex task. It is easy to do, but difficult to do well, because it involves too many variables and cannot be analyzed thoroughly.

# 7.1. Not Sure Whether It Will Happen Or Not

French mathematician Poincaré said: Probability is the measure of human ignorance! Although the proliferation of various algorithms of information explosion allows us to have sufficient means to further accurately assess the probability of an event, and, according to Heinrich's law, some risks will inevitably have an accident after a certain accumulation. However, probability itself represents uncertainty. What can be improved is the accuracy of the prediction of probability itself. Even if a certain rule is followed on a macro level, it is still uncertain whether it will happen on a micro level. All that needs to be done is to use the best available information to estimate the probability of occurrence based on historical data (industry + individual) and sometimes superimposed trend lines.

# 7.2. Uncertain When This Will Happen

Uncertainty and time are closely related. Generally speaking, it can be said that things in the past are certain, while everything in the future is uncertain. Some things that are believed to happen in the future are only extremely deterministic under limited conditions. high event. Therefore, whether the risk occurs or not is related to probability, and when it occurs is related to time. Only by determining when the risk occurs can we allocate and utilize existing resources more effectively.

# 7.3. Not Sure If It Will Have An Impact

When analyzing the impact of potential events on the target, of course, the influential events are selected as the research objects, but for some events, it is necessary to determine whether the event has an impact on the target in the first step. Sometimes it is even necessary to separate out the impact of an event which has an impact and which doesn't. Some people may say that shadow does not affect and hair does not happen are duplicates? No, occurrence and impact are sometimes not necessarily simultaneous or mutually causal, it depends on the situation.

#### 7.4. The Direction of Influence Is Uncertain

Uncertainty that has an impact on the achievement of the goal, because the risk boundary is opened, the impact of this uncertainty needs to define the direction, which is also a very important method for the organization to better identify and grasp the "good opportunity". The direction of influence can be roughly divided into three aspects: positive, negative and neutral. The most important thing is that sometimes the direction of influence is not single, especially after the length of influence is superimposed. The situation of "losing the east corner, harvesting the mulberry elm, losing the horse in the middle of the road, and knowing it is not a blessing" will appear.

#### 7.5. Not Sure How Big the Impact Will Be

In addition to the direction of the impact, how much of an impact is the focus of traditional risk assessment. Although companies try to determine the consequences or severity of an event, in order to better respond to risks, sometimes the impact of risk results It is not deterministic, but can be changed between large and small, or large or small. Therefore, it is uncertain how big the impact will be.

#### 7.6. Duration Is Uncertain

Not only when it happens is closely related to time, but the duration of the impact once an event occurs is also closely related to time. This is also a very important aspect of measuring the impact of risk. Whether this effect is linear or continuous is also uncertain.

# 7.7. Impact Velocity Is Uncertain

Another important parameter in evaluating the impact of risks in today's environment is the impact speed of events on the organization. For the same risk, slow release and rapid impact have different requirements on the organization's anti-risk capability. Especially in today's era of frequent black swan and gray rhino events, the degree of resilience to risk is also an important aspect of evaluating an organization's risk management capabilities.

# 8. Conclusion

As the global economic environment becomes more and more complex, the research on enterprise risk management also presents a more and more complete and rigorous trend based on the continuous development and improvement of management thinking, management accounting disciplines, related internal control and corporate governance theories. Enterprise risk management has developed from the simple and pure risk research and prevention at the beginning, to the research of financial risk under the catalysis of financial fraud incidents and the risks implied by the market economy, and then to the complex environment with the development of the world economy.

The development of theoretical disciplines related to change and risk management gave birth to enterprise risk management (ERM) from a strategic perspective, and finally developed into a situation of diversification of various ERM frameworks. The pace of research has not stopped as ERM research has matured, and the world economic situation is still changing. Under such

circumstances, the COSO committee can still dare to discover and study new trends, and it is worth learning and learning from the new ERM that adapts to the new environment. However, the author finds that the research and practice of enterprise risk management still needs corresponding environmental conditions. my country is currently in the second year of the 14th Five-Year Plan, deepening the reform of the economic system, promoting the transformation and upgrading of enterprises, and after building a moderately prosperous society in an allround way and achieving the first centenary goal, taking advantage of the momentum to start a new journey of building a modern socialist country in an all-round way. Provide opportunities and environmental conditions for the current enterprises to improve the enterprise risk management mechanism. The profound study of foreign advanced ideas and theories has a certain guiding effect on the continuous improvement of my country's market economic environment and the continuous improvement of various enterprise operation mechanisms.

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