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A Study on the Integration Risk Management for the Insurance Enterprises

HUA Shan[1] GAO Xin LI Xiaoyan FENG Junwen

Abstract: In the financial increasingly fierce competitive environment and against the background of financial crisis, the risk with higher levels of insurance enterprises should construct an effective management system to continuously improve their risk management capabilities. Enterprise risk management (ERM) can be used in institutions throughout the business units at various levels in various types of risk management overall. Therefore ERM study actively involved in the insurance industry for global financial stability and healthy development is of great practical significance and theoretical value. This article first introduction of the insurance risk faced by enterprises, and to the introduction of a enterprise risk management. Next, by constructing an enterprise risk management system steps introduce a enterprise risk management. In Section III introduces the COSO report further analysis of enterprise risk management content, objectives and elements and their relationships. In the latter three followed by an enterprise introduction in the process of risk management methods and tools, infrastructure construction, information systems development and organizational structure as well as the cultural environment to support culture.
Key words: insurance company; enterprise risk management; COSO

1. INTRODUCTION

The insurance industry is in the broader context of economic globalization, the insurance companies face increasing risks. Insurance companies specifically deal with risk, but the operation of their own faces many risks.

On the one hand, insurance has long been regarded as risk management, the most effective means of traditional, widely used in the field of risk management. As the collection and spread the risks of professional financial institutions, insurance companies have to bear and transformation of the insured risk.

On the other hand, insurance companies must also guard against and defuse their own risk. As a result of their own how to conduct risk management did not receive due attention, which makes a large gap

[1] School of Economics and management, Nanjing University of Science and Technology, 210094.
Email: Fengjunwen8@hotmail.com
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between insurance companies risk management and banks.

These two aspects constitute the dual risks of insurance companies. The duality of risk makes insurance companies risk management more difficult. Santomero (1995) proposed by the insurance companies risk management a reasonable explanation can be summarized mainly for managers to pursue personal interests, taxation of non-linear as well as the high cost of such a crisis. In the economic globalization and integration, insurance companies will face unprecedented risks, which must continue to build to its own level of risk management. Banking risk management over the past two decades as the forerunner of the financial industry the rapid development of risk management, and gradually towards a enterprise risk management of a new era, the international insurance industry risk management are also showing a enterprise risk management to the evolving trends. Overall financial risk management ERM has become a current research frontier of risk management topics.

2. INSURANCE COMPANIES ENTERPRISE RISK MANAGEMENT SYSTEM

Insurance companies in complex and changeable economic entities, and its source is the diversification of risk. Insurance companies must first enterprise looks at itself and the risk environment. Insurance enterprise risk is classificated according to different standards. According to the risk factors are caused by factors at the macro level or micro-factors, the insurance business risks can be divided into systemic risk and non-systemic risks. Controllable by the degree of risk can be divided into completely non-controllable risk, some controllable risk and the basic controllable risk. By insurance companies the risk of sources, the risk of insurance companies will be divided into external risks and internal risks of two major categories. The main external risks including market risk, social and political environmental risk, policy risk, catastrophic risk, competition risk and so on. External risk factors are factors beyond the control of insurance companies, the external risks are extremely complex, and some are difficult to quantify indicators to describe. Internal risk throughout the insurance enterprise in all aspects of business activities, insurance enterprises are facing the most important risks. Mainly include the actuarial risk, underwriting letters, settlement risk, investment risk, operational risk, liquidity risk, financial risk and so on. Business risks of insurance enterprises in the course are shown in Figure 1. It is worth noting that different with the banks, credit risk is not the insurance companies are facing major risks, which because the insurance companies and banks are in the different main business.

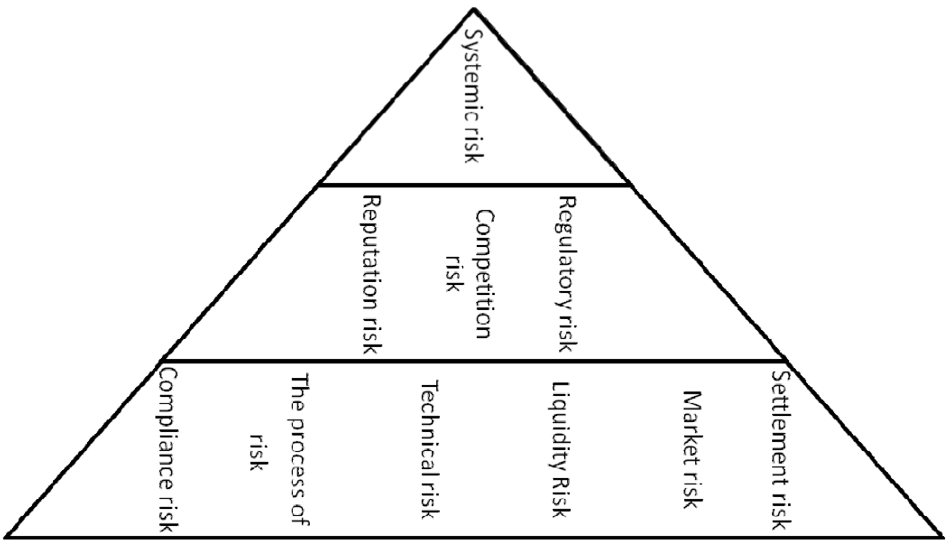

Figure 1: Schematic diagram of the insurance enterprise risk

Financial risks tend to exist in the form of composites; a single form of financial risk is often linked with each other sexually. Therefore, risk management should not merely the past of a single individual business risk management and from the perspective of the entire system for all risk management. This is a enterprise risk management foundation. Enterprise risk management ERM central idea is: the entire organization at all levels, business units, various types of risk management overall. ERM system requirements for risk management system not only deal with market risk or credit risk, but also deal with various risks, including those risks and demands involved in a variety of assets and asset portfolios, as well as the commitment of these risks, such as the various business units. ERM system should be capable of a consistent basis and to increase the total measurement of these risks, consider the relevance of all, rather than separation, using different methods to deal with different types of risk.

Insurance enterprise risk management system is in accordance with the steps to complete the following four links:

1st. Develop an enterprise risk management strategy. Enterprise risk management strategy must be to bear the risk, the risk level and risk-adjusted return expectations have a clear understanding. Its core is for the targeting of risk management and risk preferences.

2nd. the course of the mission is to link strategic objectives and linking risk management to ensure the integrity of the identification and aware of the enterprise insurance enterprises are facing risks, so as to effectively manage risk. Specific flow of the process as follows: the risk level of positioning, a enterprise risk identification, enterprise risk measurement, risk control and effective monitoring and dynamic adjustment.

3rd. Constructing the risk management infrastructure. Risk management infrastructure is constituted of basic risk management framework, which for the effective implementation of risk management processes and systems support. The first is to build risk management organizational structure, it is to implement a enterprise risk management organizations to protect and support, risk management functions need to maintain a certain degree of independence. Secondly, the enterprise also needs to explore building a enterprise risk management information system. Enterprise risk management information system using computer and computer network technology to information technology, risk management models, business operations, risk management processes combine. Enterprise risk management system consists of confidence in information-gathering systems, risk analysis system and pose a risk report generation system.

4th. Gradually formed an enterprise risk management environment. In particular, culture and communication training. Culture of this factor for the effectiveness of risk management is a positive multiplier effects of changes, equipped with advanced risk management culture, risk management system in the risk management process can play effectively. Enterprise-wide best able to form a full attention to risk management culture, which has greatly increased the risk management of the probability of success. Continuous training and communicate to ensure that a risk management system the key to a lasting and effective. ERM requires not only from the organizational, process and technology to improve and perfect, but also the needs of intentions from the cultural aspects of environmental factors such as cultivating and operating.

Insurance companies enterprise risk management system and not just referring to the narrow sense of the risk management system, which should include the operators, regulators, risk management principles and policies, business processes, information systems, internal methods and tools, organizational change and a culture of risk and other aspects, as shown in Figure 2.

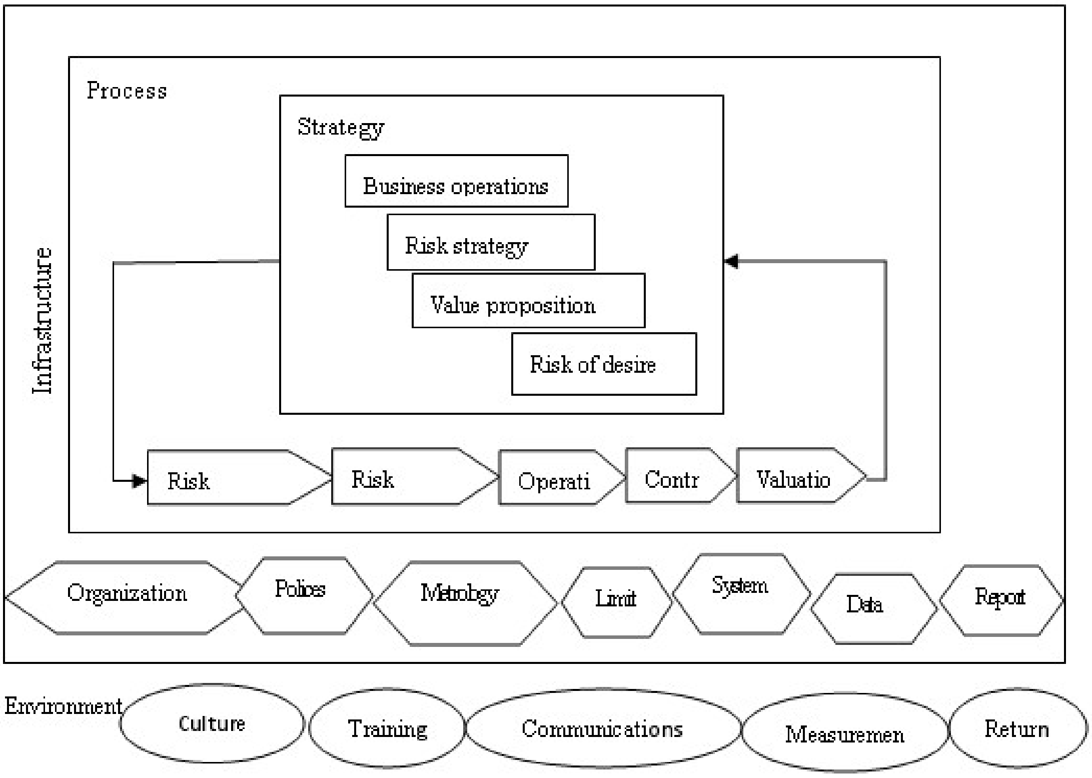

Figure 2: insurance companies' enterprise risk management system

3. COSO "ENTERPRISE RISK MANAGEMENT-INTEGRATED FRAMEWORK" AND THE ENTERPRISE-WIDE RISK MANAGEMENT RELATIONS

COSO Committee (The Committee of Sponsoring Organizations of the Treadway Commission) by the United States five major financial professional associations in 1985, initiating the formation of the. COSO released in 1992, a report on internal control a programmatic document, that is, "Internal Control - Integrated Framework." By the end of 2004 to repeal the COSO Internal Control report, released a new report on the concept of "enterprise risk management - integrated framework." First time, the report from the system standardized enterprise-wide risk management objectives, elements and levels will be an enterprise risk management from concept development to the practice of the operational level.

Enterprise Risk Management is the basic premise of the existence of each of the main are for its stakeholders value. All are facing the main uncertainties. Management challenges faced by the authorities in order to increase stakeholder value and struggle at the same time, it is necessary to determine how much to bear uncertainty. Uncertainty may be destroyed or value added, thus not only on behalf of the risks, but also on behalf of the opportunity. Enterprise risk management to enable management to effectively deal with uncertainties and the resulting risks and opportunities, enhance the ability to create value.

Enterprise Risk Management is the deal with the impact of value creation or maintenance of the risks and opportunities, can be defined as: enterprise risk management is a process, It consists of a main board of directors, management authorities and other personnel, applied in strategy development and throughout the Among all enterprises, aimed at identifying the main body may affect the potential issues, manage risk so that the main risk in the capacity of, and in the main goal to provide reasonable assurance.

Enterprise risk management, including: risk preferences and strategies for enhancing the risk coping strategies or by operation of accidents and loss, identification and management of multiple and cross-enterprise risks, seizing the opportunity to make improvements to capital deployment. Enterprise risk management framework to achieve the following four main types of objectives:

Strategic objectives - a high-level goals, and mission related and support its mission;

Business objectives - an effective and efficient use of its resources;

Objective of the report - the report of the reliability;

Compliance goal - consistent with applicable laws and regulations.

Enterprise risk management, including eight interrelated elements. They are:

Internal environment - the internal environment contains the keynote of the Organization, which the body mainly on how to understand and deal with the risk of setting the foundation, including risk management philosophy and risk capacity, integrity and moral values, as well as the business environment in which they find themselves.

Goal Setting - must first have goals, management can identify the potential impact on a matter of goals. Enterprise risk management to ensure that the regulatory authorities to take appropriate procedures to set a target to ensure that the chosen objectives support and meet the main mission, and with it the risk of capacity in line.

A matter of identification - to identify the impact of the main goals of internal and external matters, the distinction between risks and opportunities. Chance to be fed back to the management strategy or objective-setting process.

Risk assessment - by considering the possibility of risk and impact to its analysis, and to decide how to proceed as a basis for management. Risk assessment should be based on the inherent risks and residual risks.

Risk response - risk management has been chosen to deal with - to avoid, to bear, reducing or risk-sharing - a series of actions in order to risk control in the main risk tolerance and risk capacity or less.

Control activities - the formulation and implementation of policies and procedures to help ensure the effective implementation of risk response.

Information and communication - related information to ensure that employees perform their duties and practical way to identify, access and communication. Effective communication of the meaning of a much wider, including information in the main of a downward trend, parallel and upward mobility.

Monitoring - on enterprise risk management to conduct a enterprise monitoring and, if necessary, be amended. Monitoring can be sustained through management activities, individual evaluation or a combination of both to complete.

A goal is a subject trying to realize what enterprise risk management of the constituent elements of what it means to realize them. Between the two has a direct relationship. This relationship can be in a three-dimensional matrix to express the form of cube out.

Such a way that we express not only from a main concern to the whole enterprise risk management can also be from the target category, the constituent elements or the angle of the main unit, or even any of them a sub-item to be aware of the point of view.

COSO's "enterprise risk management - integrated framework" is not only an enterprise risk management will enhance the practical level, for a enterprise risk management provides a framework, but many of these definitions, suggestions and ideas were absorbed into the textbooks, legislation and rules development. On the one hand, although the report is not necessary to comply with and referenced, but its risk management in all over the world have had a wide-ranging implications. It reflects today's leading risk management philosophy, which was facing a greater degree of uncertainty in the insurance industry in the best risk management guidelines. On the other hand, financial globalization and integration of external competitive pressures that encourage insurance companies to follow up on the COSO report in order to better participate in international competition, and ensure their own competitive advantage.

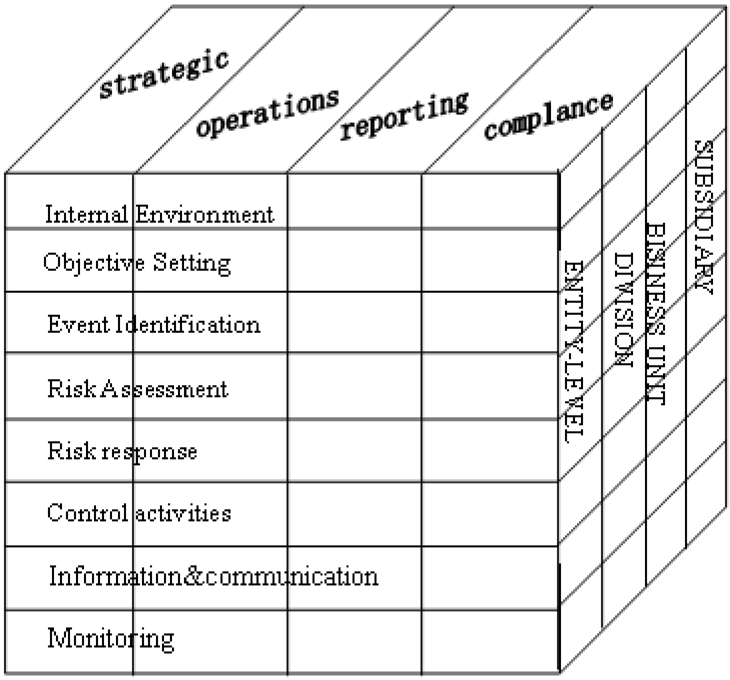

Figure 3 ERM objectives and elements of three-dimensional diagram

It is worth noting that from the ERM framework for enterprises to improve internal controls, the enterprise internal control and risk management has gradually move closer and integration trends, that is, risk management led to the establishment of enterprise risk management strategies to adapt to the new internal control, from the internal control to risk management. Internal control of enterprise risk management is an integral part. Enterprise risk management framework covering internal controls, thereby constructing a more powerful concepts and management tools.

In addition, because the existing insurance enterprise risk management and capital adequacy calculation of the risk of classified systems and other types of financial institutions cannot be compatible and result in failure analysis table, thus the overall risk to the Group unification of measurement, plus the total, control and supervision of a difficulties.

As the three pillars of financial insurance to try in the new Basel Accord based on the identification and classification of risk, so as to financial groups lay the foundation for enterprise risk management is worth considering and resolving problems.

4. ENTERPRISE RISK MANAGEMENT METHODS, MODELS AND TOOLS

Enterprise risk management system lies in the establishment of various models, which establish in a number of core concepts. They are:

1st. VaR (Value at Risk): pointed out the various risks arising from the measurement of the potential loss method;

2nd. Economic capital (Economic Capital) or venture capital (Capital at Risk): refers to the risk of potential losses of capital requirements;

3rd. Risk-adjusted rate of return (Risk Adjusted Return on Capital): refers to measure risk-adjusted returns size, then measure the efficiency in the use of the capital.

From risk measurement to risk capital requirements to risk-adjusted returns, to increase shareholder value, these four aspects of an enterprise risk management constitute the complete chain, shown in Figure 4.

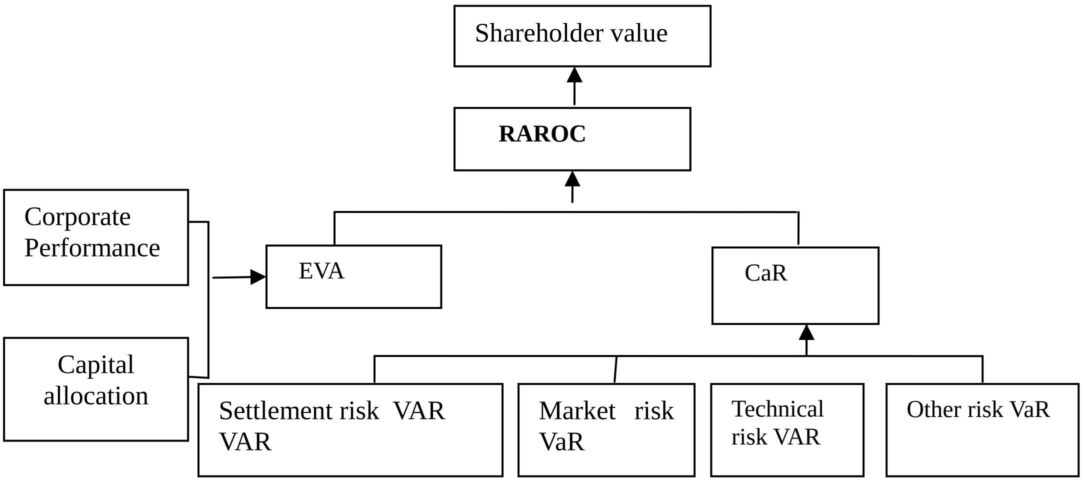

Figure 4. The chain based on the core concept of ERM of ERM system

The following specific on the actuarial risk, systemic risk, credit risk and compliance risk of these four risk management methods and tools are introduced.

1st. Actuarial risk

- SSv & C's PTS software
- Baconv & Woodrow's Prophet software
- standardization and review systemv

2nd. Systemic risk

- cash flowv matching method
- cash flow testv
- duration - Convexity testv
- Montev Carlo simulation

3rd. Credit Risk

- With Moody, Standardv & Poor, Duff & Phelps and other rating agencies issued by credit rating
- throughv internal rating system
- risk-adjusted rate of return on capital RAROC,v Sharpe ratio
- Position Exposurev
- use of financial derivativesv

4th. Compliance risk management

based on the COB IT and IT L compliancev management software

Setting sector compliance, identification, monitoring,v assessment reports and the timely suppression of compliance risks, to participate in the organizational structure and business process reengineering.

5. ENTERPRISE RISK MANAGEMENT INFORMATION SYSTEM CONSTRUCTIONS

ERM methodologies and tools for information systems to provide data and deal with all types of information. On this basis, as business analysis and management and decision support of the primary means to actively build a sophisticated risk management information systems. On the other hand, the application of risk management techniques are also built on advanced risk management information system. On the one hand, through the establishment of enterprise, timely, accurate, dynamic risk measurement, early warning, reporting, monitoring and post-treatment system, full use of computers and networks for data collection, collation and analysis to help managers of the underwriting, claims, products, market , customers, agents, reinsurance and other business risks to make a enterprise analysis for a enterprise risk management to provide the necessary sources of information and the ultimate decision support. On the other hand, the insurance enterprise risk management information system can be fully implemented risk information collection, processing, transmission, automation, realize the sharing of information resources. Through the establishment of database, model base, method library for fast, accurate and reasonable prediction and analysis, can improve the efficiency of decision-making to eat, saving management costs.

Enterprise risk management information system is composed by information-gathering systems, risk analysis system and risk report generation system.

Information-gathering system: information collection system and timely reflection of the risk of internal and external information, the formation of the organization of information upload, order and parallel flow. We should focus on internal information gathering can be sensitive and accurate reflection of the insurance business, marketing, development, investment, such as the development and changes in the operating and financial information. External information is focused on analyzing the deal with those responsible for business development has a significant or potentially significant impact, such as political, economic, policy, science and technology, financial services, a variety of markets, competitors, supply and demand information, consumers and enterprise development-related information. At the same time attention to the adoption of information processing systems to maintain the database updated, especially the market data and transaction data, market data (such as interest rates, exchange rates, stock prices, etc.) should be based on changes in the market, with transactions at any time to update, transaction data (such as premium income, financial amount of investment tools, etc.) can be automated by computer from the company's computer trading system to gain.

Risk analysis system: the system should be able to reflect the risk status, development trends, as managers of risk prevention and control to provide a scientific basis for decision-making. Risk analysis system to measure the process of risk to achieve through computer analysis of the contents of the main payment rates, payment rates, risk positions, risk-adjusted earnings, VAR, scenario testing, simulation testing.

Risk report generation system: the risk of report generationv system to cope with risks summarized the current situation, analysis of various risk management policy effectiveness analysis, the formation of regular, enterprise and special reports from time to time, in accordance with the procedures for sending a certain decision-making bodies at all levels of risk; to for different types of risk to make distinctions between different reporting channels and risks of the report of the division of responsibilities. Pay particular attention to the importance of risk reports. Because of the risk of reporting can be fully revealed the risks of an enterprise, risk-reward relationship, as well as present and future market factors and internal factors. The risk of an effective risk management reporting framework for concern about the emergence of information and enable the information to reach different aspects of the user's goals and requirements. According to the user's request, the results of risk analysis in accordance with specified formats automatically generated different levels of risk reporting, for the provision of high-level decision-making related to risk analysis support.

Enterprise risk management system data accumulated from the risk model should be the business needs to design, depending on the application characteristics of data classification. Data model should be designed to take full account of data integrity to support the future model improvement and support, according to measurement applications.

6. RISK MANAGEMENT POLICIES, ORGANIZATIONAL STRUCTURE AND BUILDING A CULTURE OF RISK

Enterprise risk management system in the most inner layer is in strategic planning; in the outer layer is the infrastructure construction and environmental support. Enterprise risk management strategy to dominate the whole ERM system.

Enterprise risk management strategy is the core of targeting risk management, risk preferences. Enterprise risk management objectives and business goals, business environment and enterprise-specific attributes are closely related, risk management goals should reflect the promotion of enterprise value, survival and profitability of these basic business goals, and these goals must adapt to business growth and stability. Enterprise risk management objectives not only reduce risk, and to actively participate in enterprise resource allocation, through the optimal allocation of resources for the enterprise to create the maximum profit.

Risk appetite is a enterprise risk management in the keynote, it is the risk of objectives, policies formulated by the premise. Risk means to achieve its objectives in the process of willing to accept the risk that the number of risk tolerance is defined as the process of business goals to achieve an acceptable level of difference. Enterprise risk management is not to indulge in pure risk reduction, but the need for senior management to run the enterprise has a clear understanding of a enterprise, truly understand the risks borne by enterprises large and small, and according to a predetermined level corresponding risk management, will remain at risk within the established standards.

Infrastructure construction in the more important except on a reference to an enterprise risk management information system, there are organizational structure. Risk management organizational structure is a enterprise risk management organizations to implement security and support, risk management functions need to maintain a certain degree of independence. Enterprise risk management model will be the risk of separation of functions and operational functions, a separate set up a clear, effective the overall risk management departments. Its emphasis on an enterprise risk management departments of various co-ordination of risk management, risk management departments of various Leaders of a enterprise risk management departments have direct reporting lines. It also stressed the importance of risk portfolio analysis. Portfolio analysis of risk from the enterprise sector is the point of view of the overall risk analysis of project risks and the relationship between the benefits.

Insurance risk management in essence is a kind of management activities. Management activities and not just technology, methods, protocols and means of synthesis and, more importantly, fostering a culture, to make everyone in the same context of a culture have a unified and a unified cognitive behavioral patterns. A risk management culture as part of a enterprise risk management system, an important part of its advanced or not, will the sustainable development of the insurance industry have an important impact. A risk management culture must be strictly in accordance with national laws, regulations, policies and regulatory departments to operate, and regulate the operation flow.

7. CONCLUSIONS

In this study, a combination of COSO report analyzes a enterprise risk management system, in which the construction of infrastructure and the tools in the method and composition of the framework to do the introduction, etc., and finally stressed the importance of the concept of a risk management culture to enhance the competitiveness of insurance enterprises importance.

Financial enterprises, especially the insurance companies to conduct a enterprise risk management is a general trend, since the COSO Committee in 2004 on "Enterprise Risk Management - Integrated Framework" issued for a enterprise risk management since the standard, and because of ERM in banking risk management the results, I believe there will be more and more insurance companies will adopt a enterprise risk management.

Enterprise risk management objective is to take the initiative in the risk management process to achieve the balance of risks and benefits, the risk management of commercial banks should support the overall strategy and should therefore be fully aware of all the risks, and establish a sound risk control mechanism, to control for uncertain operational risk should be taken with caution.

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