# Flexible Control on Operational Risk Conduction of Commercial Banks

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**Abstract:** Commercial bank exists in a complex and variable survival environment with the characteristics of dynamic conductivity. Commercial bank needs to maintain its status quo to meet the requirement of change in order to control its operational risk. This paper defines the conception of operational risk conduction for commercial bank, and analyzes the flexible mechanism of operational risk conduction for commercial bank, as well raises the flexible controlling strategies on operational risk conduction for commercial bank to reduce the operational risk conduction.

Key words: Commercial Bank; Operational Risk Conduction; Risk Control; Flexible Ability

#### **1** Introduction

On June, 2004, the Basel Banking Supervision Committee (BBSC) defined operational risk as a result of inadequate or failed internal processes, in which people and systems lead to the risk of loss. After that, researchers and practioners attempt to define operational risk from various perspective. Risk Professional Association (RPS) states that the operational risk is a kind of risk associated with the business operations, including the operation failure risk and the operation strategies risk in terms of environmental change. Liu Chao argued that operational risk is inherent in commercial bank that provides banking products and services for customers<sup>[1]</sup>. Fan and Yang Xiaoguang illustrated that commercial banks operational risk is fluctuations of income or cash flow that is caused by inadequate internal control system or control failure or other uncontrollable events<sup>[2]</sup>. Fei defined operational risk as the failure of implementation caused by commercial bank employees because of their limited rationality and irrational action<sup>[3]</sup>.

Previous research were maily focused on controlling for operational risk of commercial banks from separate aspects such as risk prevention and early warning, real-time control and feedback control. Few scholars studied the dynamic conductivity of the risk from point of view of the ideological flexibility. They think commercial banks control operational risk is rigid, and the control measures emphases on the improvement of the system and IT support<sup>[4]</sup>.

However, systems, processes and IT control will never be perfect, and the rigid management is a extreme mechanized management methods, which cannot make organization and people play initiatively and creatively. Importantly, commercial banks operational risk are dynamic conductive, carrier adhesive and path dependent, which need the control methods to be flexible. Therefore, it is meaningful to apply the flexible idea to control commercial banks operational risk in theory and practice.

## 2 Flexible Mechanism, Conduction Carriers and Paths of Commercial Bank Operational Risk Conduction

### 2.1 Flexible mechanism of commercial bank operational risk conduction

As an open system, commercial bank's business activities, services and management capabilities are always in a changing turbulent and unpredictable environment. Commercial banks achieve their functions under the internal and external environment factors. In the process of their evolution ,commercial banks exchange material, energy, information with their associated systems such as central banks, other financial institutions and customers to form a network in which they enjoy income and risk(as shown in figure 1).

In the network, once a node system or behavior produces operational risk, the risk will be conducted through a specific carrier and a conductive path to commercial banks. The reasons why commercial bank operational risk is dynamic conductivity are the followings: 1) the commercial banking activities are in a constantly changing environment; 2) the limited rationality of commercial bank staff behavior reveals; 3) the problem of asymmetric information or information variability exists in the banking business. Also, scientific technology has negative effects.



Figure 1 Network of Commercial Bank Operational Risk Conduction

Based on these, it is necessary to define a conception about commercial banks operational risk conduction. This paper refers to it as a process in which commercial banks operational risk will be conducted inside the commercial bank or between commercial bank and related parties under the effect of the risk source, through a certain carrier, along a certain path. Thus, commercial banks operational risk conduction elements include: 1) Risk source, from which operational risk conduction arises; 2) Operational risk conduction carriers, which are medium bearing the risk of commercial banks operating conduction, including the staff of commercial banks, bank information, science and technology; 3) path of risk conduction, which is the route or means depended by commercial banks operational risk, for example, the inherent business processes of commercial banks.



Figure 2 Mechanism of Commercial Bank Operational Risk Conduction Note: the arrows in the figure are for operational risk conduction path

**2.2** Conduction carriers and paths of commercial bank operational risk conduction 2.2.1 Operational risk conduction path taking staffs as carrier

A large number of commercial bank illegal cases illustrate staff in banks is the key factor leading to operational risk, which is a major carrier in operational risk conduction. Dealing with banking business, driven by the limited rationality constraints, such as basic professional ethical and psychological imbalance, again with the subjective act, the bank's personnel inevitably leads to operational risk (as shown on Figure 3. Moreover, the operational risk of the commercial banks is not only caused by insider, but also outsider, which is the result of win-win. Employees within the bank would obtain a creating efficiency result--a low-level punishment and a high-level income. Under the role of the broken window effect, other people will imitate their action. Operational risk in the commercial banks will be conducted taking staff as conduction carrier.



Figure 3 Personnel Path of Commercial Bank Operational Risk Conduction

2.2.2 Operational risk conduction path taking information as carrier

When commercial banks deal with their business relationships, there exist principal-agent problem. Because of a lot of asymmetric information, operational risk conduction takes information as the carrier conduction. Although commercial banks have system benefits, they more easily get some information within the financial industry, for example, deposit and loan interest rates increase or decrease ect., their information are more later than the central bank decision-making department, which easily lead to operational risk and form the information carrier along with conduction path. Moreover, because the information has a characteristic of conductivity, measurability, and identifiablity, so information is a natural conduction carrier of commercial banks operational risk.

China's commercial banks are general five-class system. Information conduction mechanisms are from top to bottom, from bottom to top, lateral transferring or jumping pass. Though without taking account of information asymmetry, the information will be disturbed or noised during the long information transmission process ,which will produce information distortion because of disturbance of noise, at least ,the original information encoded could be injured (as shown in Figure 4). Under the influence of the damage information, the wrong information will be received by the information executor .The wrong or incorrect operation will appear a information-conduction chain of operational risk.



Figure 4 Informational Path of Commercial Banks Operational Risk Conduction

2.2.3 Operational risk conduction path taking technology as carrier

In the era of global finalization, commercial banks, like the other economy entities, are transferring from the business-led innovation to technology-led innovation. The more developed the country, the more innovative the financial system, and the greater the dependence on technology. However, due to double-edged sword of technology, technology causes a lot of risk when it enhances the commercial banks' operational efficiency. These technologies risks mainly are: led by wired or wireless communication technology, caused by computer hardware and software technology or keyboard operation and due to Internet and other networks. Funds information from Banks' internal and external technical customer is easily threatened because of using unsafe computer hardware and software. The internet threats and malicious attacks from the failure or defect of communication technology make technology using sectors facing more threats. In this case, direct results of operational risk conduction are funds owned by the bank or its customer losses (as shown on Figure 5). And the more important the clients are, the greater the conduction losses might be.

![](_page_3_Figure_1.jpeg)

Figure 5 Technological Paths of Commercial Banks Operational Risk Conduction

# **3** Flexible Abilities for Controlling Commercial Bank Operational Risk Conduction

#### 3.1 Enhancing buffer ability of operational risk conduction

Buffer Ability is a kind of basic ability that the commercial banking system adapts to environmental changes. It is a kind of necessary means that the commercial banking system reduces the occurrence of operational risk, and prevents operational risk conduction. Commercial banks have been required to have the buffer capacity of resisting operational risk to respond to environmental changes. The commercial bank must reserve all kinds of resources, including human resources, financial resources and physical resources. Considering the money supply, macro-monetary policies and even natural environment, commercial banks often need to reserve a certain amount of money supply in order to be able to operate continuously to ensure that sufficient currency.

#### 3.2 Strengthening adaptation ability of operational risk conduction

Adaptation ability is a kind of changed adaptability. When the environment of commercial banks is changing, operational risks begin to work and appear conduction signal. Commercial banks can make the appropriate emergency adjustments to adapt to these changes, not to change the basic functions of the system. The size of adaptation ability of commercial banks is determined by the speed and scope. The speed of change is determined by the time that the operating risk change from gathering, outbreak to conduction. The scope of change is caused by various environmental factors affecting operational risk. Adaptation ability is a kind of necessary means for commercial bank against operational risk conduction. When commercial banks are not able to change the environment, they can strengthen their ability to adapt to environmental changes before they adjust their operations. Of course, from the initiative viewpoint of the commercial banks operating behavior, it is negative flexible response for commercial banks to strengthen their adaptation ability.

#### 3.3 Promoting innovation ability of operational risk conduction

Innovation ability is a kind of adaptive capacity that commercial bank takes new behavior and new measures to control the operational risk conduction. Commercial banks not only need adaptation ability but forecast ability dealing with the result and the role of operational risk conduction. On the one hand, commercial bank should adjust itself to adapt to the environmental factors operational risk occurs. On the other hand, within the possible scope, commercial banks can actively take measures to influence or change the direction of operational risk conduction path and speed to make them develop according to their will. Therefore, when the environment changing, commercial banks need scientific prediction on the operational risk, optimize the allocation of existing resources to make use full of the potential operation and enthusiasm. To improve the innovation capability of the commercial banks operations risk is beneficial to not only controlling the real existence of operational risk conduction, but preventing occurrence of operational risk conduction.

#### 3.4 Increasing coordination ability of operational risk conduction

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Coordination ability is a kind of ability that commercial bank integrates the stock resources to improve itself to access information, control transaction and balance the interests of stakeholders. Deng has used "bucket theory" to explain the needs coordinating the various elements in the enterprise financial management system<sup>[5]</sup>. In his view, all key elements must be found in a system to improve the financial management system flexible. Moreover, the 16 elements in enterprise financial management system "not only economy, but also be executable." In fact, the explanation also adapted to the coordination of commercial banks to control operational risk conduction. Under the guidance of the "bucket theory", commercial banks need to have a high level coordination to effectively integrate all resources to enhance the system capturing information ability and improve the whole flexibility of commercial banks to reduce and prevent the occurrence of operational risk conduction.

#### **4** Conclusion

Commercial banks operational risk is produced under the combined effects of the internal and external environment. With the constantly changing environment, operational risk has a dynamic conductivity. Commercial bank operational risk conduction has the characteristics of path-dependent and carrier-attachment. The main carriers of operational risk conduction are the bank employees, information and technology. Commercial banks controls operational risk conduction must have the abilities of maintaining the status quo to adapt the change even takes according change. Therefore, it is beneficial to apply the theory of flexibility on controlling operational risk for commercial banks to improve their resisting risk capacity, accordingly, to increase the organization adaptability of commercial banks and their ability to deal with uncertainty.

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