Design and Achievement for Accounting Internal Control Management System of Commercial Bank based on B/S Structure

Xin Cheng and YinXing Li

Abstract. Since the international financial crisis has intensified with more severe global economic situation and the local crisis has already extended to the whole world from the US subprime crisis and international financial crisis initially to the Greek Debt Crisis and European Currency Crisis. How to solve the commercial banks risks in domestic is the first problem. In this paper, the accounting internal control management was designed by B/S structure to warning and control as well as resisting changing. Tests show the system has been improved the systematical automation disposal, strengthen core competitive power of efficient service and got a mighty technical support for the steady operation and development.

Keywords: Commercial bank, international crisis, accounting internal control, B/S structure.

Introduction
Since 2003-2004 onwards, China's comprehensive reform of state-owned commercial banks has taken a substantial step. State-owned Commercial Banks surgery structural transformation of the official surgeon; December 2003, the state spent $45 billion of foreign exchange reserves, the Bank of China and China Construction Bank capital injection, in preparation for the listing. Chinese financial sector is undergoing a change of blowing hot and cold. However, although listed property can solve a single problem, but that does not mean that it is a panacea. In the system of internal control of state-owned commercial banks is still very weak, but also a lot of business risk situation, not a good thing too optimistic.

Since the nineties review turbulent international financial markets, the collapse of Barings Bank incident to Japan and Japan; from the BCCI collapse to the Asian financial crisis, without exception, confirmed that: any lax internal bank controls, they are likely to lead to disaster. Therefore, how to establish a comprehensive, effective and reasonable internal control system in order to safeguard the bank's assets were complete
and maintain the rational flow of capital, standardize business practices, it has become an important issue in the management of state-owned commercial banks are facing. In 1988, the "Basel II" was promulgated and continue to improve, marking the western commercial banks to further improve risk management and financial supervision and unified theory, but also means that the international banking sector relative complete risk management principles basic system. Banks compete under Basel II norms will be based on the competitive ability of bank risk management risk identification, measurement, evaluation, control and risk culture content, establish a sound risk management system will be a bank in the same competition in the industry and can win an important guarantee for long-term survival.

In recent years, although the accounting internal control system is more complete and integrated application system with the application of the promotion and constant upgrading, partially accounting internal control systems have been gradually achieved by the control system to the system (machine) to control changes, but still there is some accounting internal control system can not achieve control systems, accounting systems do not exist in place, the key to the presence of hidden economy and even lead to the case, from an accounting point of view of internal control, mainly due to not yet formed a complete system of internal accounting controls, that beforehand control, process control and supervision, monitoring and evaluation afterwards, to correct the problem to change other aspects have not formed a complete system, no long-term mechanism to establish accounting risk control.

With concurrency and accounting internal control system, enabling commercial banks to get rid of the manual handling daily business behind model to achieve a pre-warning irregularities and potential risks, a matter of timely control afterwards found associated risks slipping through the net through monitoring and timely corrective risk control system, the internal control of commercial banks to establish a comprehensive risk management system automation, not only a substantial increase in business efficiency and accuracy, more effective prevention of various risks of the line, to avoid financial losses related to further improve the bank's bank the core competitiveness of the industry, for the sound operation and development of commercial banks to provide a strong scientific and technological support.

**Demand analysis**

In an increasingly competitive banking industry, since the commercial banks and foreign currency business fast development, the need for business information research and analysis of large and complex data, consuming large human cost. In business you can have fast and accurate data to generate useful information clarifying business, while allowing commercial banks to advance and accurate early warning and control the various risks of modern technology systems for intelligent management, is particularly important. Therefore, as soon as possible in order to develop the database, data mining and online analytical processing technology, the existing automated data extraction, transformation, output, rapid extraction of useful data information from vast amounts of data and can manage internal accounting controls and risk warning system, has become the commercial banks to enhance the core competitiveness and urgent problem, but the advanced technology system in China's banking industry is still in its initial stage and improvement. In this paper, the modules and functions of accounting internal control system design, can meet the commercial banks to use the system for risk early warning beforehand, in the matter of risk control, but also be able to facilitate its monitoring and
ex post evaluation needs to prevent all kinds of business management and operational risk.

According to the rules and regulations and industry regulations banking accounting internal control, relying on counter service automation system, set up a guard against all kinds of business management and operational risk management internal accounting system, the ultimate goal of developing accounting internal control system. The use of advanced scientific management accounting risk control system operating the business, commercial banks can fundamentally employees of the business operations of the risk control and management, timely detection of potential risks in advance preclude taking risk prevention management measures, and make post-supervision management, accounting internal control in order to achieve systematic, standardized, timely elimination of potential business risks, enhance their market competitiveness, and can better enhance policy execution, and comprehensively improve the bank's risk control management and operational compliance to prevent all kinds of commercial bank business management and operational risk.

Figure 1. The process of internal control.

Figure 2. The inform and communicate of risk assessment.
Design Principles

To meet the commercial banks to strictly prevent and control violations and internal control requirements of the potential risk of system operation, mainly in accordance with the following principles of the design of the accounting internal control system:

1. To ensure the stability of the application systems principles
   R & D system is mainly taken based on J2EE B / S three-tier structure technology, the use of open source presentation layer MVC STRUTS achieve technical architecture, operating system, application is the Linux operating system, database using Sybase database, WebLogic middleware as possible ensure that the system technology is mature, stable and fundamentally.

2. Ensure that the system security policy
   In order to ensure the absolute safety of the system is running, to strengthen the system of user roles and permissions set up the unified management, the establishment of a restricted mode of operation and hierarchical control systems to ensure that all types of business and money transfer transactions highly secure system user operation.

3. The system design is simple, practical principles
   Development and application of the system should ensure that high-quality business operations efficient and easy to operate. After the on-line system, the system can optimize operational processes, greatly enhance the operator selected hoof massive complex information processing system data rate, reduce human resources, save on labor costs and improve the whole MORALS control management and compliance operating level to meet the majority of the requirements of users.

4. System operation principle of independence and strong compatibility
   It should have a strong independence and compatibility on the application of the system in dealing with the daily business of all kinds, both easy to operate independently maintain static customer information data processing related businesses, but also to commercial banks and other business systems interface seamless link, managers at all levels so that commercial banks can be useful sources of information sharing system.

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Figure 3. The internal control evaluation system.
Information management module technology architecture design

The overall policy framework designed to achieve internal accounting management system for multi-user and cross-platform. Implementation of the system is based on the WEB application B J2EE technology system / S structure of three-layer structure, and the use of more mainstream now, technology is relatively mature and stable Jian source STRUTS achieve MVC the presentation layer technology architecture. System architecture is used by the operating system Linux operating system, database and middleware sybase database using the WebLogic application server, using B / S architecture of three-tier structure, streamline operations division, the processing business operations clearer, simplified management and it reduces the complexity of system software development effort, reduce system maintenance costs. The framework based on J2EE application server technology, fully object-oriented JAVA language to develop applications multi-tier architecture using MVC pattern (MVC: Model-View-Controller) shorthand. "Model" on behalf of meaning: the application business logic, through the JavaBean, EJB component implementation; "View" on behalf of meaning: the application indicates surface, generated by the JSP page; "Controller" on behalf of meanings: to provide application process control, typically a Servlet. Through this design model that can be applied to logic, process and display logic into different components to achieve. Stmts is an Apache project organization, like other Apache project organization, just as open source projects. Struts is a good MVC framework provides the underlying support for the development of MVC system, which uses the technology is mainly Servlet, JSP and custom tag library.

Summary

For business development of commercial banks with the customer's financial needs and continuous innovation, this paper adopt iterative development model, to facilitate control and evaluation. At the same time, generated and used "to evolve" prototype system needs to inspire the development process, improve the efficiency and accuracy requirements. System Unified Modeling Language (UML) for the analysis and design description language, taken based on J2EE B / S three-tier structure technology, the use of open source presentation layer MVC STRUTS achieve technical architecture, operating system, application is the Linux operating system, database using Sybase database using WebLogic as middleware. Currently implemented function modules has been officially put into use stage, and achieved the desired results.

With the increasing rapid development of commercial banks and business types, in order to prevent all types of operational risk, accounting internal control system of standardized management have become increasingly demanding, therefore, be based on the future business development of commercial banks and their special risk control actual demand, full use of the potential of existing software and hardware resources and systems to further optimize the sound system, streamline operational processes, to further improve the security of system operation, in order to ensure that the system continued to function fully advanced.

References


