

# Research on the risk management of enterprise cloud accounting application under the background of big data

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**Abstract.** Under the background of big data era, cloud accounting as an important basis for enterprise construction and innovation development, can not only improve the efficiency of enterprise accounting work, but also improve the application mode of traditional accounting information. According to the analysis of the application of enterprise cloud accounting in recent years, although the new technology concept has improved the enterprise financial management mode, it also brings certain risks to the innovation and development of enterprises. Therefore, some scholars have increased the risk assessment of cloud accounting in the research, and built a cloud accounting system based on big data technology, so as to quickly explore and deal with the hidden security problems. After understanding the basic concept and functional characteristics of Yuan accounting, this paper mainly studies the structure of enterprise cloud accounting system under the background of big data, and determines effective measures of risk management from the perspective of long-term development, which is of great importance to the innovation and development of enterprises in the new era.

**Keywords:**Big data; Enterprises; Dollar accounting; Risk management; Platform architecture.

## 1. Introduction

Cloud computing mainly relies on the Internet platform to enable enterprises to realize resource sharing and comprehensively improve the efficiency and quality of enterprise accounting work. In the combined development of Internet and cloud technology, enterprises can orderly complete data budget, account verification, information delivery and other basic work in the cloud accounting system platform. At the same time, they can use remote access to integrate marginal record information anytime and anywhere. In addition, cloud accounting can also enable enterprises to seamlessly connect financial data between various departments to further solve the problem of financial information asymmetry. Since the financial data can be authorized to allow multiple users to access the system functions at the same time on the accounting platform, for example, when the customer is supervising the work, the accounting staff can directly edit the records on the platform, so the efficiency and quality of the practical operation have been improved, which meets the requirements of the enterprise financial accounting innovation and development in the new era. Traditional enterprise accounting work needs to consume a lot of time and energy to maintain equipment security, but at present, enterprises can directly use the cloud accounting system processing, do not need a large number of financial personnel, and enterprise informatization construction cost has been effectively controlled, managers can put more energy on strategic decision-making. Taking cloud accounting service platform as the core to implement risk management, on the one hand, it can change the office mode from offline to online, on the other hand, it can facilitate the staff to check the express information anytime and anywhere, reduce the working pressure of accounting personnel, and propose personalized functional services consistent with enterprise management.[1-3]

According to the practical investigation and research, the current enterprise cloud accounting system application mainly faces the following problems: First, the data storage application does not have the standard. In the big data environment, enterprises do not put forward clear cloud accounting service guidance documents, which leads to the trend risk of relevant data information. At the same time, in the face of vicious competition among cloud accounting providers, it is difficult to deal with problems related to late service. For example, a customer's server will stop

working when a vendor's management fails. If no unified cloud accounting service provider standards are proposed and enterprises purchase multiple cloud accounting systems at the same time, it is difficult to realize the shared application of data information between different service providers, and the data quality cannot be quickly defined. Secondly, cloud data security risks. The application of cloud accounting system in enterprise operation and management will inevitably face information security risks, which mainly refers to the insecurity of accounting information when it is transferred to the cloud, which is embodied in four aspects: storage, transmission, transfer and backup. From the perspective of practical application, cloud accounting data information security risks are caused by storage technology virtualization and distributed strategy does not meet the requirements, suppliers processing accounting information authority is too large, information transmission is likely to be hacked, the system regularly update and upgrade there is a risk of confusing data information; Finally, the legal system is not perfect. Compared with developed countries, there is still a big gap in the development of Chinese enterprise cloud accounting. Especially, the legal system and preferential measures during the use are not perfect, the service provider has not established a clear industry standard, and the third-party cloud accounting supplier market access and withdrawal mechanism is not standard, which leads to the enterprises in a complex and unstable market environment.[4-6]

According to the development trend of big data technology innovation in recent years, the scope of enterprise cloud accounting system construction and application will be more and more extensive. Therefore, based on the understanding of the development background of big data, according to the structure and application characteristics of cloud accounting system, this paper mainly discusses how to do a good job in the risk management of enterprise cloud computing under the background of big data, so as to improve the level of enterprise financial accounting work.

## **2. Methods**

### **2.1 Application Mode**

To build enterprise cloud accounting system based on big data, IT is necessary to combine IT hardware and software resources provided by service providers and obtain required services from the network platform access resource pool. In the working state, this system can connect and integrate a large number of computer processing nodes, using distributed application structure to form a large accounting operation center, in order to provide users with high-speed financial business processing, data access, data storage and other basic services. Combined with the application mode analysis shown in Figure 1 below, it can be seen that the whole system is mainly divided into three parts:[7-9]

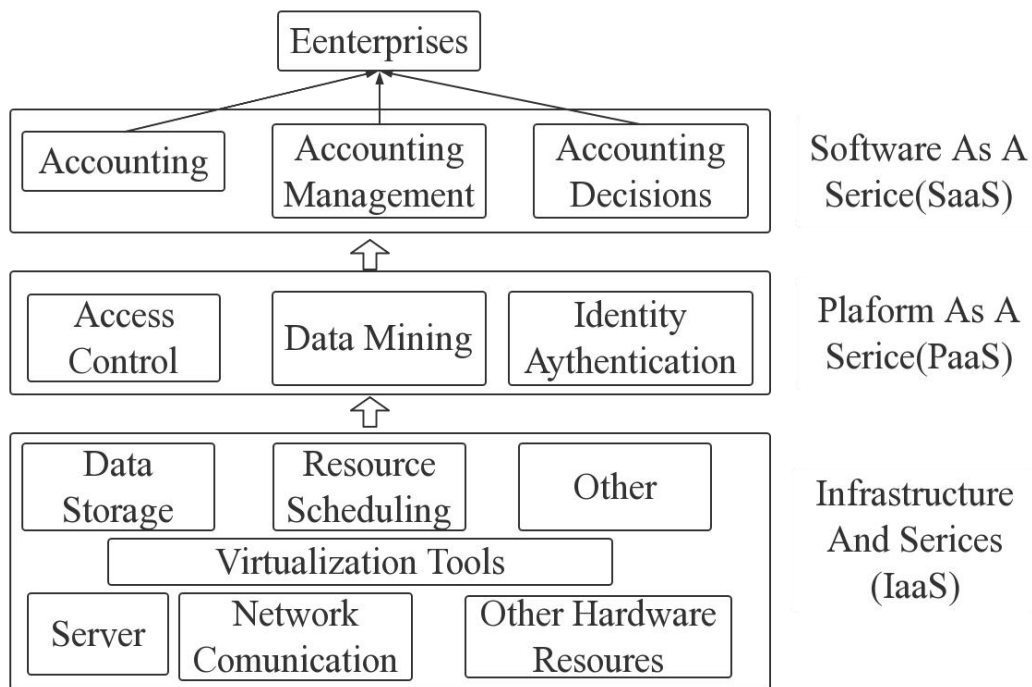


Figure 1 Structure diagram of system application mode

First, infrastructure as a service. This part belongs to the lowest level of the system, including PC server, network application server, integrated database, storage and other hardware resources, can use distributed computing, virtualization and other technologies to expand the capacity of hardware resources, and according to the requirements of the enterprise, users can complete the job processing at different times or in different stages;

Second, platform as a service. This part is in the middle layer of the system, which is mainly to provide the basic platform for users, but does not have the logical business application software. Under normal circumstances, users can operate according to the basic business needs of the enterprise such as financial accounting, build accounting business processing system, and finally provide personalized services according to the business needs;

Finally, software as a service. This part is to provide users with new software and hardware application mode on the basis of infrastructure and service platform. Compared with the traditional cloud accounting service mode, this part integrates virtualization technology, the Internet, distributed computing, etc., to create high-quality online service functions for enterprises. It does not need to invest too much hardware and software and professional personnel, and does not need any operation management and daily maintenance. All services can be purchased directly.

## 2.2 Application Services

First, big data resource management. Enterprises can set up a big data resource management system according to the current status of financial accounting work and the proposed accounting information standardization system. The specific structure is shown in Figure 2 below:[10-13]

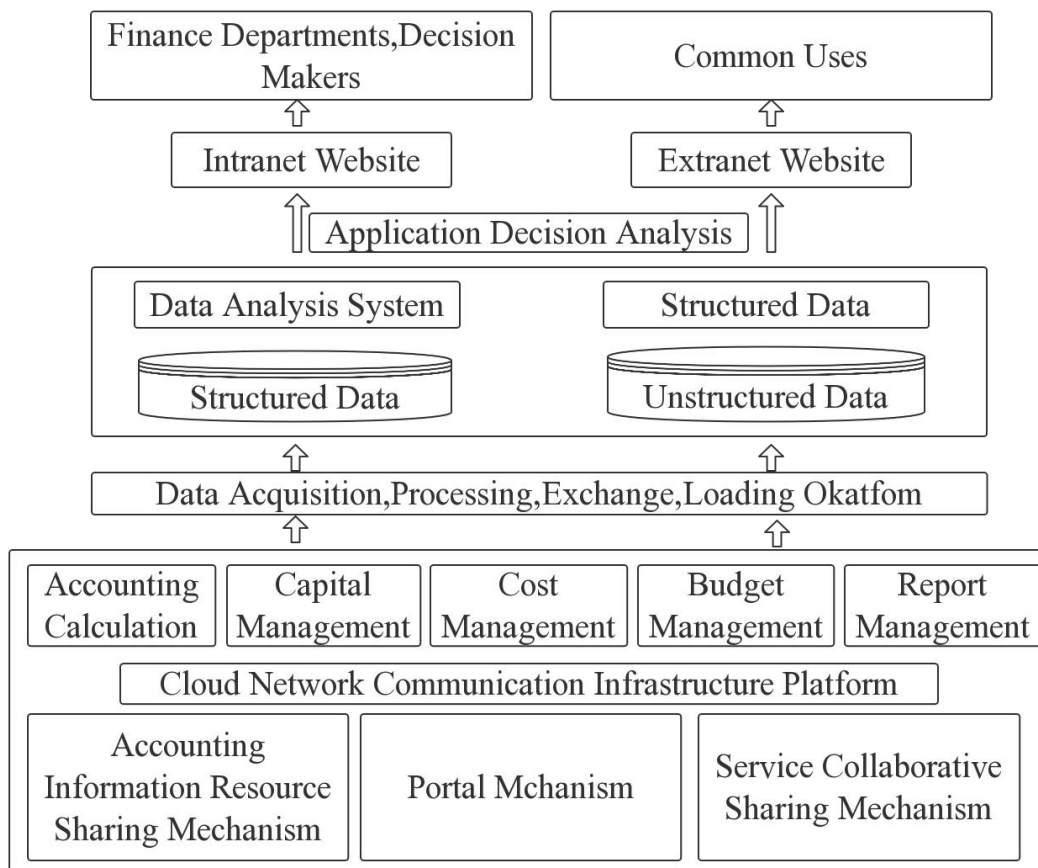


Figure 2 Structure of big data resource management system

According to the analysis of the figure above, the function of the overall system can be divided into three contents: First, data collection. Enterprise financial data contains enterprise operating cost, capital, budget and other information, the collection of these contents and the use of automatic processing tools for preprocessing, through the optical fiber communication network and system users share exchange, can further improve the application value of enterprise financial original archives data; Second, data analysis. After integration, the financial data can be classified and stored in the data warehouse according to the prescribed logical business structure, so as to facilitate the processing and application. Third, data application. In big data mining processing technology, basic financial data resources are analyzed, hidden data patterns are found, and directly converted into information resources expected by users. Both financial departments and external personnel can access the application according to system permissions.

Secondly, knowledge management. Based on the analysis of the structure diagram of the knowledge management system shown in Figure 3 below, it can be seen that in the era of big data, enterprises can use intelligent hierarchical storage technology to complete knowledge management. The storage hardware devices included in it will be connected together through the network attached storage or open system, and the requirements put forward by users will be transferred to the associated storage devices. After the data operation of the storage devices is completed, The final result is fed directly to the requesting user. At the same time, the intelligent tiered storage technology will allow different levels of data information to be automatically migrated between various storage devices according to the active degree of the file.

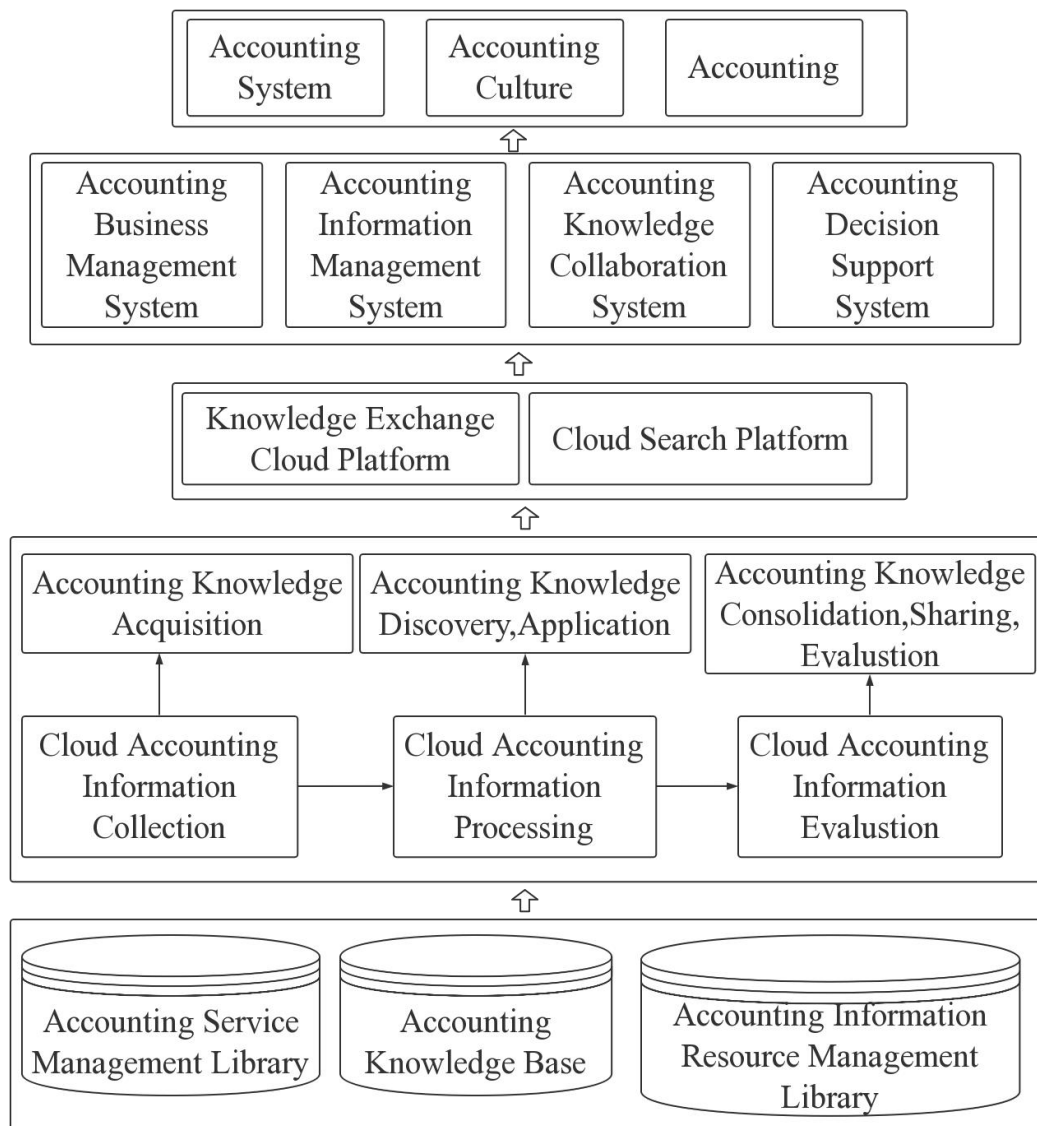


Figure 3. Structure diagram of knowledge management system

Finally, decision support. The purpose of constructing an informationized financial cloud accounting system based on big data environment is to propose scientific and perfect management decisions. The specific structure is shown in Figure 4 below. At present, the original database of the enterprise can no longer meet the data analysis and application needs of a large number of users, so some scholars put forward the use of BP neural network, deep learning, support vector machine and other mining technologies for processing, which can not only master more valuable information resources, but also mining the potential model and knowledge in the data. And then stored in the model base and knowledge base, in order to form a powerful cloud accounting decision system. BP neural network can self-organize and self-adapt the storage and learning of training data, quickly distinguish different categories of data information, master more content related to enterprise financial accounting; Support vector opportunities combined with statistical theory to solve mining problems such as small data samples and data nonlinearity, and finally grasp the hidden value information.[14-15]

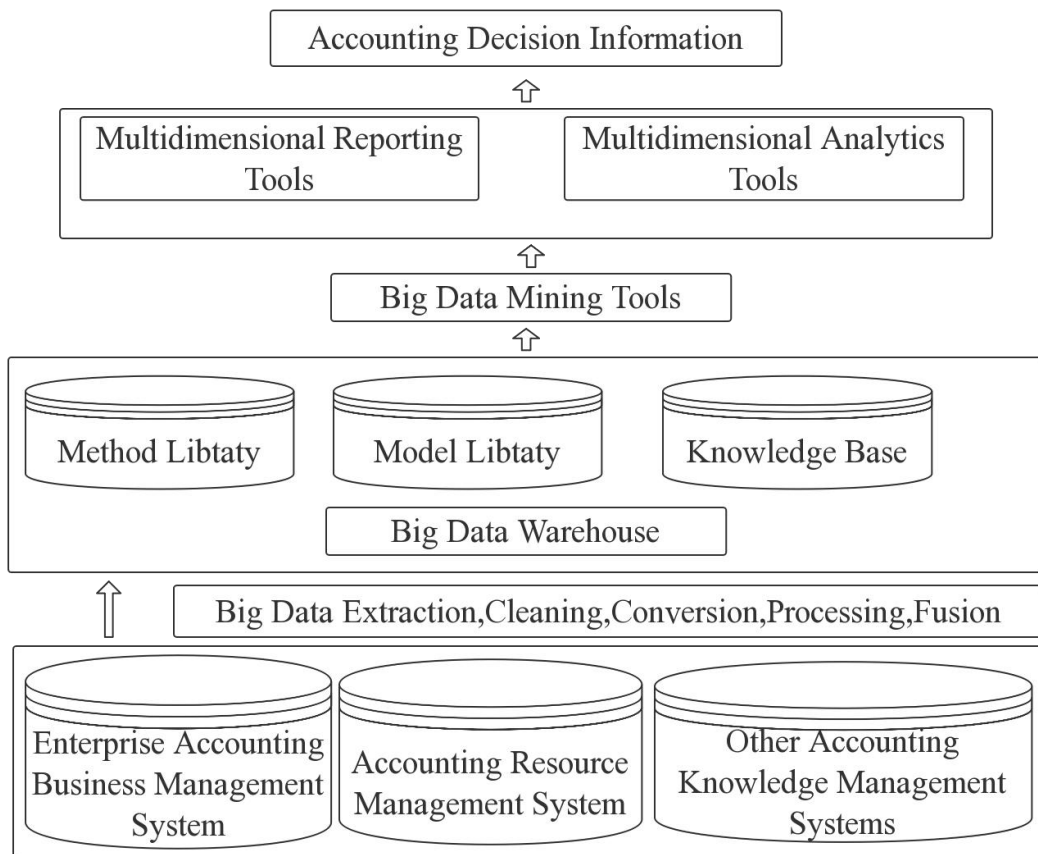


Figure 4 Structure diagram of decision support system

### 3. Result analysis

According to the application process of enterprise cloud accounting as shown in Figure 5 below, it not only helps the financial managers of enterprises to obtain more information and solve the problems faced by traditional business processing, but also strengthens the internal risk management and control and optimizes the comprehensive competition level of enterprises.

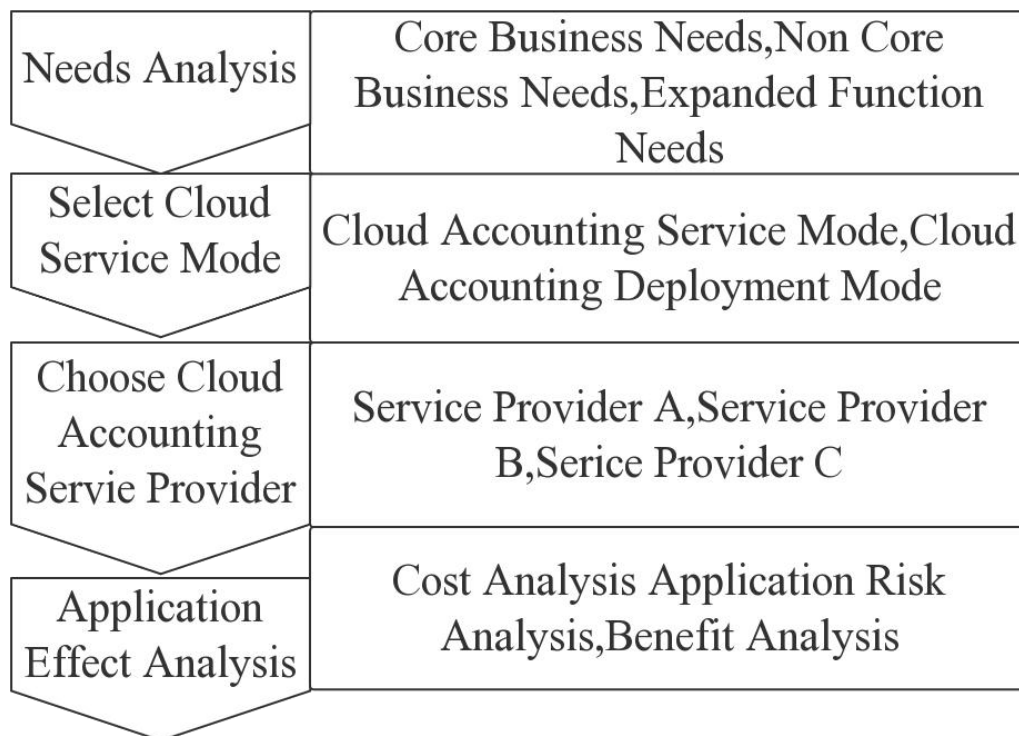


Figure 5 Flow chart of enterprise cloud accounting system

Therefore, under the background of big data, the risk management of enterprise cloud accounting should do the following work: On the one hand, optimize the service function of cloud accounting system. As the cloud accounting platform is a software system proposed based on cloud technology, it has basic functions such as verification, account reconciliation and record in practical operation. Therefore, during the period of risk control, enterprises should optimize the accounting business process according to their own development status and develop personalized service functions to truly meet the service requirements of different enterprises in financial accounting management. On the other hand, the construction and promotion of cloud accounting security mechanism. In the Internet environment, data security is the main factor leading to enterprise cloud accounting risk problems, so we should focus on solving relevant problems. At present, cloud accounting system suppliers should increase capital and technology investment at the same time, from the perspective of security, stability, reliability and other aspects of system operation, so as to improve the security level of cloud accounting system. For example, the application of firewall in the construction of security system, the installation of network interface antivirus detection software, according to the system user proposed authorization and approval mechanism, hierarchical management of enterprise accounting information and data resources, not only can avoid the excessive loss of enterprise accounting information, but also can reduce the risk of fast information disclosure.

#### 4. Conclusion

To sum up, the present enterprise financial management of our country has been running for many years, not only accumulated a lot of the basic data resources, but also mastered the advanced technical theory in the practice exploration. As the traditional enterprise information management system has been unable to meet the needs of financial operation under the environment of big data, the enterprise has begun to build the extension staff accounting system, and introduced the big data mining analysis and application technology, in order to grasp more financial operation data and quickly develop the decision-making policy of financial management. In order to fully display the application role of enterprise financial cloud accounting system in the development, enterprises

should continue to combine new ideas and new technologies to optimize financial accounting management in the future, so as to improve the level of enterprise management and strengthen the market competitiveness of enterprise reform and innovation.

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