



# Research on Accounting Methods in Financial Auditing Based on Cloud Computing

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**Abstract.** In the new economic era, the construction and reform of China's socialist modernization economy are further deepened. How to establish a healthy and stable market economic order, and how to formulate business strategies and management strategies that meet the company's development direction and development plan based on the implementation situation have become issues that need to be considered and resolved by current domestic enterprise managers. In order to help companies accelerate the reform and transformation of business models, It requires the guidance of scientific financial management and accounting audit concepts to supervise and control the company's various production activities, operations, and operations, so as to promote the company's healthy and sustainable progress towards its goals. In the following, the author will analyze the important role of accounting for the company's development and operation, and explore the relationship between corporate accounting and financial accounting management, based on personal practical experience in participating in the company's accounting and financial management work, Summarize the shortcomings and countermeasures of domestic enterprises in accounting and auditing work at the current stage, with a view to improving the quality and level of accounting and auditing work in domestic enterprises and promoting the sound development of the company.

**Keywords:** accounting · Accounting computerization financial audit · Cloud computing · Artificial intelligence financial analysis system

## 1 Introduction

Accounting is a powerful way to reflect the production and operation status of enterprises, and its impact on enterprises There are two main aspects: first, [1, 2]. The overall flow of funds of an enterprise can be clearly demonstrated through financial audits, which helps the Finance Department widely summarize and upload the overall use of funds of the enterprise; Secondly, based on the financial statements of the enterprise, make an objective evaluation of the overall operation and management of the enterprise, identify the shortcomings of the enterprise in terms of funds, and provide more reasonable suggestions for the use of funds for the enterprise. Not only that, accounting work also has a certain degree of supervision and management functions, supervising the use of

funds within the enterprise, and conducting systematic and effective management of the enterprise's income, promoting the normal conduct of internal financial work, thereby ensuring the economic benefits of the enterprise [3, 4].

Accounting has always been an important task for business management and has played an irreplaceable role in the development of enterprises. In actual accounting work, Md's financial audit work is more important and can accurately reflect the production and operation situation of the enterprise [5]. Through financial audit work to reflect and manage the company's capital flow, and accurately judge information such as financial statements of enterprise management, Ahonen P can effectively analyze the company's financial and capital issues, thereby enabling the company to adopt appropriate solutions [6]. Financial auditing also plays a supervisory role in the financial management of enterprises, and Iacobelli S can ensure the correctness and accuracy of various work of enterprises. At the same time, it can also accurately manage the income and capital flow of enterprises to maximize their economic benefits [7]. However, the above research on accounting is still incomplete and needs to be improved.

In summary, on the basis of mutual supervision and complementarity between accounting and auditing, the continuous updating and changes of centralized accounting methods have brought challenging issues to auditors in audit departments, making their work content constantly change, with both advantages and disadvantages in everything. Based on the new accounting methods, financial auditors can reexamine and explore more audit methods through their understanding of financial accounting, and continuously improve and develop audit concepts. Only in this way can audit work become more and more outstanding, and audit business continue to develop.

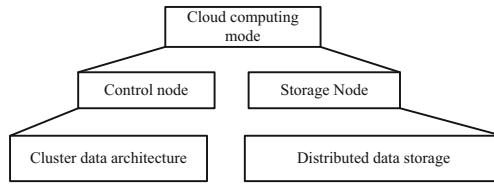
## 2 Accounting Method

### 2.1 Cloud Computing

The system architecture of cloud computing is divided into two parts: "control node" and "storage node". The control node adopts a cluster architecture to store metadata and schedule storage nodes. Storage nodes perform large-scale distributed storage of data, which can be replicated or RAID backed up. The so-called cluster technology refers to a region where there are many servers with shared storage space. The servers communicate through a LAN, and users can access the stored data and services provided by any server in the cluster. When a server encounters a problem, the business it runs will be automatically taken over by other servers, so the accounting methods in load balancing and financial auditing are implemented [8, 9]. Figure 1 shows the basic features of cloud computing:

### 2.2 Artificial Intelligence Financial Analysis System

In the era of artificial intelligence, it is necessary to establish a sound financial analysis system to ensure that financial analysis work is well carried out and improve its quality requirements. A complete financial analysis system is mainly composed of the following parts: First, advance forecasting. Comprehensively consider the development trend of



**Fig. 1.** Overall Structure of Cloud Computing

enterprise development strategy and financial analysis work under artificial intelligence, and construct a key indicator system. Specifically, with the help of artificial intelligence systems, various elements are organically linked, and a process oriented and standardized data model is constructed using a consolidated data collation and processing method. Different variables are set, and the final output indicator results are obtained. After multiple data calculations, the indicator target values that meet the strategic needs and develop in line with the trend are obtained [10, 11]. Secondly, control during the event. Mainly process control and deviation correction. Specifically, regular analysis of the implementation of indicators is conducted to clarify the changes in indicators. Once any abnormal changes are found in the indicators, an immediate alarm is required, and control efforts are strengthened to effectively correct deviations. Thirdly, post evaluation. It mainly involves difference analysis and evaluation. Conduct index retrieval and benchmarking on your own, and conduct analysis and discussion based on the data results to deeply explore the causes of changes, identify the main factors, and develop targeted solutions. Finally, the evaluation results will be used as a guiding basis for prior prediction, and a closed-loop financial analysis system will ultimately be formed. Apply the solution to the enterprise development strategy, and evaluate the indicators again. After multiple iterations, modify the target values of the indicators to guide the management and control of various processes [12, 13].

### 2.3 Corporate Financial Audit

The important characteristic of financial audit is its independence, which is a key factor related to whether it can truly play its role. The basic principles of relevant personnel in financial auditing are objectivity and impartiality. However, in the current stage of financial audit work, independence is not very strong. In the specific implementation process of financial audit, especially in the internal financial audit work of some enterprises, there is a lack of strict supervision and management systems. Due to various factors, some auditors have not followed the principles of objectivity and impartiality, issued untrue audit reports in accordance with the relevant provisions of scope audit, resulting in financial audit being mere formality, It has not really achieved the functions of supervision and management, thus disrupting the market order. Therefore, it can be said that the lack of independence of audit directly leads to the normal development of financial audit, which also has a negative impact on the normal order of the market. The following formula is used to calculate the audit method for enterprise finance [14].

To ensure the calculation effect, the continuous power flow method is generally used for calculation. The following is the calculation process:

The ordered weighted average data of  $\beta = (3r, \beta_2, \dots, \beta_n)$  T, which defines the financial calculation method n as a variable, is:

$$n = \beta(\beta_1 - \beta_2) + 3r \quad (1)$$

where,  $\sigma_j$  is the data value located in the  $J$  position after the calculation and analysis of the enterprise financial data set as  $\beta_i (i = 1, 2, \dots, n)$ ;  $Dd \lambda = (\lambda_1 \lambda_2 \dots \lambda_3)^T$  is the total data located in the financial audit calculation, and its calculation formula is:

$$\lambda_j = Q\left(\frac{j}{n-1}\right) - Q\left(\frac{j-1}{n-1}\right) \quad (2)$$

Then the final value is equal to:

$$Q(r) = \left\{ \frac{r-a}{b-a} \right\}, a \leq r \leq b \quad (3)$$

This equation can efficiently and quickly calculate the safety and reliability of using financial audit methods for enterprises [15].

### 3 Big Data vs Accounting Experiment

#### 3.1 Big Data Accounting Analysis

Non structural data brought by big data is gradually increasing, and a large amount of structural data and non structural data exist simultaneously in accounting information. This is also one of the important characteristics of big data technology. Big data accounting technology can effectively combine and analyze non structural data and structural data, and discover the relationship between data through quantitative accounting”, Reflect the financial data of enterprise operation, and further analyze and evaluate the data. Although traditional accounting The accounting information obtained through traditional accounting methods is not much, and the time and cost that accountants spend on demonstrating this information cannot be ignored”.

#### 3.2 Big Data Accounting Shows that

Big data accounting emphasizes the correlation between financial data. Under the technical conditions of big data accounting, accounting emphasizes the correlation between data, while the causal relationship under traditional methods is secondary. For example, correlation refers to what happens when data interacts, while causality emphasizes why results occur. Big data accounting technology generally interprets the internal connections between data through relevant connections. Big data accounting technology brings both structured data and unstructured data, with more unstructured data. The sources of traditional accounting information are mostly structural.

Data can be analyzed and utilized, and some can even be directly adopted. Big data accounting technology brings unstructured data, which has a significant impact on the source of accounting information. The relationship between various data can effectively help enterprises further achieve the organization of financial data, thereby identifying the main data points for profitability, and indicating a clear direction for enterprises to obtain more profits.

**Table 1.** Evaluation of Big Data Accounting

name	Accuracy (%)	Authenticity (%)	Reliability (%)
Zhang San	60	40	25
Li Si	49	37	17

### 3.3 Big Data Accounting Evaluation Results

Traditional accounting believes that the accuracy of accounting information is very important, eliminating fraudulent financial information and unsystematic errors in accounting. However, in the era of big data, accounting focuses on the practical utility brought about by analyzing accounting information. Big data accounting requires less accuracy in financial data, which means that getting 60% accuracy is not what big data accounting technology is concerned about. On the other hand, in traditional accounting information systems, due to the lack of a large amount of data support for enterprises, the acquisition of any data information will have a very important impact on accounting information. Therefore, Zhang San and Li Si need to ensure the authenticity and reliability of traditional accounting information by making a percentage evaluation of the reliability of the connection between data to ensure that accounting information will not be distorted. Describe big data and accounting evaluation as shown in Table 1.

As shown in Table 1, we can make an overall evaluation of the financial data of big data accounting. Zhang San's evaluation accuracy is 60%, authenticity is 40%, reliability is 25%, Li Si's evaluation accuracy is 49%, authenticity is 37%, reliability is 17%

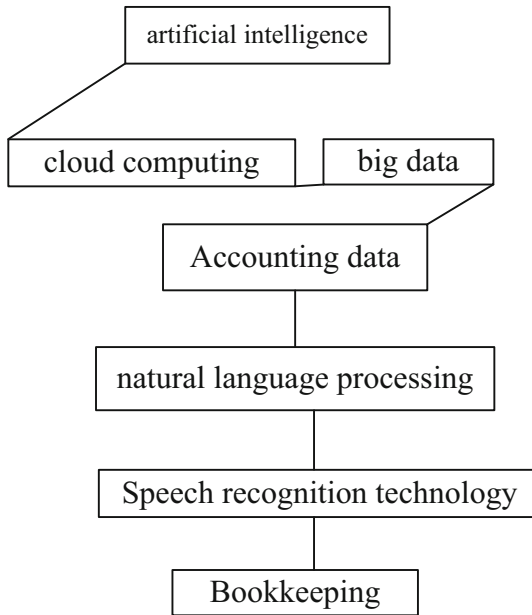
## 4 Results and Discussion of Artificial Intelligence Changing Accounting Methods

### 4.1 Artificial Intelligence Changes the Current Situation of Accounting

With the advent of the era of artificial intelligence, it has been widely used in all aspects of social life. Autonomous vehicles, clean houses, and advanced unmanned aerial vehicles all testify to this. And accounting is an important management tool in economic activities. In the era of artificial intelligence, accounting methods will usher in a revolution, which will bring great impact to the accounting profession.

### 4.2 Accounting Research Shows that

Accounting is the reflection and reporting of economic transactions that have occurred. Accounting personnel prepare bookkeeping vouchers based on the identification of original vouchers and accounting standards, and then register sub ledgers and general ledgers, and prepare accounting statements on this basis. In the past, the computerization of accounting solved the work of registering general and subsidiary ledgers and preparing accounting statements, greatly improving the efficiency of accounting work, and generating many well-known accounting software companies. However, the pain point is the



**Fig. 2.** Flow Chart of Intelligent Accounting

manual entry from original vouchers to bookkeeping vouchers, characterized by heavy workload, cumbersome business, and the need to complete. Today's artificial intelligence accounting, relying on cloud computing and big data, can expand At the front end of the accounting intelligence system, based on e-commerce and system integration, a large number of standardized electronic original vouchers (such as electronic invoices, bank receipts, etc.) are constructed and automatically converted into accounting vouchers for access to the accounting intelligence system, which can reduce a large amount of manpower investment. More complex is the use of core cognitive technologies such as "Nature Processing", "Speech Recognition Technology", and "Machine Learning" in artificial intelligence to identify non-standard originals (such as contracts, documents, audiovisual, and other accounting related documents) and convert them into electronic originals, thereby achieving automation of accounting documents and automatic generation of accounting documents.. As shown in Fig. 2, the process diagram of computationally intelligent accounting is shown.

### 4.3 Intelligent Accounting Strategy

It will greatly replace the routine work of accounting personnel such as reading original vouchers, making judgments, and preparing entries. From this, it can be seen that "intelligent accounting" refers to the use of artificial intelligence technology to deeply intervene in the data entry process in the accounting system, thereby changing the data entry method in the accounting system, allowing greater release of the "complex labor" of accounting.

## 5 Conclusion

In a word, in the new era, with the increasing development of social market economy and increasingly fierce market competition, enterprises need to face various challenges, and accounting work is also in a more complex environment, requiring more difficulties. To this end, cloud computing has been used to achieve load balancing and accounting methods in financial auditing, allowing for the flexible adoption of diverse audit methods. Through the optimization of the relationship between big data and accounting data, it also improves the intelligent work structure of artificial intelligence accounting, continuously improve the rapidity of internal accounting personnel, regularly and systematically equip them with professional knowledge that can meet the objective needs of accounting work in the new era, continuously strengthen internal and external supervision, and provide a favorable internal and external environment for the orderly conduct of accounting work. In this way, enterprises can achieve maximum economic benefits with minimal operating costs and embark on the path of sustainable development.

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