

# The Change of Accounting Industry Under the Background of Big Data Era

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**Abstract.** As before, such as the budget management that has difficulty processes need to collect relevant information, repository and analysis, large data may encounter obstacles to clear its technology; financial management also dominate in terms of search a useful value investment projects, improve enterprise management process, save the operation cost etc. The big database background, trading, business records, accounting, financial prediction based may be injected new vitality. Can predict methods of financial management concepts, financial management function, the mode and the financial management mode will be possible subversive changes.

## Introduction

The advent of the era of big data, financial management concept and mode of all kinds of disruptive changes have taken place, for traditional financial field, the continued development of financial management is more and more difficult, more financial management is to sales, research and development, human resources or related field of extension and penetration; According to the mode of financial management, the company's financial position and the task should be biased towards any associated with the company's business mainly data collecting, processing and analysis [1]. In view of the traditional financial management and financial management of the era of big data of obvious differences, we regard data in the era of financial management for the "big finance". The management of the enterprise will be a huge impact, due to the presence of the large financial this influence across tactical and strategic level.

First of all, the appearance of management accounting will look brand-new. Based on data from the big financial firms, the comprehensive budget management, fund centralized management; internal control can be more efficient and smooth running and development [1]. The management accounting has the ability to go beyond the constraints of financial accounting, decision making and management in the enterprise plays a more important role, and to promote the enterprise value increment.

Then, the Angle of financial management and remarkable increase of insight and outstanding enterprise management wisdom is obvious. Large financial due to the large data of technical support, can be in the enterprise decisions using data mining techniques to master a lot of useful information, the information will help enterprises to reduce the common mistake, is helpful for enterprises to reduce systemic risk, can let enterprise more accurate projections for future development. Implementation in the enterprise, the usage of big data technology are able to use quantitative method to the costs and benefits of different scheme and process analysis comparison, and then complete the enterprise value maximization of scheme selection [1]. In addition, the big data to make financial personnel to detect abnormal situations as soon as possible, so that enterprises can take corresponding measures, early, reduce the risk of possible loss or the potential zero. All of these make enterprise management more visionary.

## The change of financial data processing under the background of big data

Financial data, which is the core of the enterprise, reflect and support the normal operation of business capital and trade, our handling of financial data and financial information fully tap, can have

the efficiency of the improved financial management works, compression enterprise capital operation cost, for enterprise to bring the good, the objective of the profits [2]. The financial data of the enterprise is the most basic, the most abundant accumulation, enterprise resource arrangement and analysis on the basis of can bring value to the enterprise value.

**The development of financial data processing.** Accounting data is in the process of enterprise business activities systematic records of various kinds of economic issues. On accounting data acquisition, storage, processing and transmission in the process of technology known as adopted by the accounting data processing technology [2]. Accounting data processing technology development has experienced five stages:

1) Accounting data manual processing stages, namely, accounting personnel rely on computing tools such as abacus, paper on accounting data acquisition, storage, processing and transmission, etc. Manual processing stages in the process of accounting business processing showed good adaptability, flexibility and reliability, but also show the low speed, low efficiency and high error rate and other shortcomings.

2) Accounting data of mechanical processing stages, namely, accounting personnel use puncher, check whole machine, electrical and mechanical equipment, electronic equipment and other tools of accounting data acquisition, storage, processing and transmission, etc [2]. Accounting data mechanical processing phase improves the calculation speed and accuracy of data processing, but these tools exist large system, the cost is too high, the operation difficulty and the stability is poor.

3) The electronic computer accounting data processing stage. The advent of the computer provides the technical support for the accounting data processing. Accounting centralized storage and automatic data processing greatly improved the working efficiency of the accounting data processing; improve the timeliness and accuracy of accounting information. This stage, the tool of computer technology and accounting include data processing, information sharing and exchange mainly through floppy diskettes, optical disks and other storage medium [2]. The stage accounting system and the operation process is mainly to simulate the manual way, only separate stand-alone operation of the relevant accounting procedures, a calculation program independently an accounting business, there is no link between each other.

4) Network accounting data processing phase. With the development of network technology, the financial department can be used independently of computer and network, such as an Intranet (Intranet), Extranet (Extranet), Internet (Internet) and so on carries on the processing of accounting data. Use of distributed database technology, Internet technology, middleware technology, system integration technology and other modern information technology, especially the development and application of ERP system, enterprise accounting information system has realized the business process, work process and information process of integration, eliminate the "information island" phenomenon, significantly improve the information sharing of the entire enterprise [2]. At the same time, to realize the integration of the business processing and accounting, financial information and non-financial information integration and integrated accounting and management accounting.

5) Big data era accounting data processing phase. The development of the Internet of things technology, cloud computing is becoming more and more mature and popular, to the development of large data laid the important technical foundation. Big data phase of the accounting data compared with the previous stage, has a qualitative change, mainly reflected in: big data phase, the connotation of the accounting data more rich, the structure is more complex; accounting data analysis and application of the key, analysis method is more complex, more intelligent; once the accounting data theft, the harm is greater.

**The financial data of the era of large data processing.** In the development of information technology, the mobile Internet technology, computer technology and collaborative development, accounting information and information acquisition and processing structure will be more complex [3]. These data besides the data of the four general characteristics of "V", but also has the characteristics of invisibility include and viscosity:

1) Data types (Variety). Environment data not only include digital structured data, voice, images such as unstructured data. Because the close correlation of data and business events, and then make the structured data and unstructured data is more complex, more is not easy to handle.

2) Timeliness (Velocity). Under the Internet of things has a high requirement on the data processing time, because under the Internet of things and people's behavior in a very short time to finish, so data generation and data processing under the Internet of things has timeliness.

3) Low density value (value). Enterprise accounting data will continue to produce, but has practical application value of data is only a fragment, or a part of a series of data. Take video for example, in the process of continuous testing, to be able to use the data may be only one or two seconds.

4) Invisibility and the viscosity of accounting data. The number of the medium information is the business on the Internet of things collection, transmission and processing of digital information main information [3]. These data can be directly by the sensor detection, which is easy to spread; But the accounting data is invisible, it can't through the sensors. At the same time, the accounting data is in the business data exist can't disconnect with the business data.

Due to the financial data contains more important characteristic of the era of large data, so financial data processing become enormous challenges and demanding. Based on large data centers development platform to establish data analysis platform mainly includes high-quality talent configuration, equipment procurement, etc [3]. If you want to use a single solution to solve the problem of big data is not possible, need a series of the fusion of traditional and new technology solutions. Want to build a large data analysis platform and dig out valuable information from large data, first of all, enterprises need an extensible, flexible, and can manage data infrastructure, i. e. large data centers development platform.

### **Big data era of comprehensive budget management reform**

At present, the enterprise budget management faces two major challenges: results from their own management of enterprise requirements and regulators to enterprise's requirement.

Use ERP informatization means such as for event management already cannot satisfy the requirement of modern enterprise management, in advance to control the game become more and more enterprises; Second, along with market competition intensifying, how to reasonably develop business target, ensure the target execution in place, is becoming more and more important [4]. Finally, the group internal management level is uneven because of a large number of mergers and acquisitions, group need improve its internal management level; In addition, large enterprise groups, due to the complex industry layout and uneven geographical distribution, the requirements for the reasonable distribution of the limited resources is extremely urgent.

Now enterprise budgeting primitive, management is very difficult, for data of judgment for budgets and irresponsible, not reference to historical data and forecasting data, budget adjustments are difficult and reasonable rolling forecasts [4]. In budget control link, the lack of a complete control system, and don't know where is the control is reasonable, the lack of information control measures, only depends on the enterprise management personnel post-mortem.

In the process of budget analysis, most enterprises is still in the chart to carry on the simple analysis, not for the different aspects of management to the financial data analysis, want to rights management is difficult to effectively.

Actually, comprehensive budget management in the three main problems:

- 1) How to develop the scientific management goal?
- 2) How to scientifically goal decomposition?
- 3) How to through the analysis of the budget implementation to the manager's demands can be done by constructing budget information management platform?

Through access to the same period the actual data, and then through the budget number and the number of actual comparison, realize the budget implementation report, and then according to the budget implementation, management and implementation strategy can adjust the next item. At the same time, the budget is not only the finance department. Enterprises to establish a set of financial

integration model form a complete budget system. Starting point is the sales budget, the cost budget, the human resources plan, purchasing plan, cost planning, during the financing plan, finally finished all the corresponding budget information, release a budget report [4]. By working with sales department and finance department, formation of cooperative engagement across the sector planning platform, let the enterprise limited resources can be reasonably allocated to different regions and different departments.

However, if you want to do everything, Enterprise's strategic target decomposition, budgeting, budget report is achievable, but the enterprise budget execution supervision should be put in enterprise information systems, since the business information system occurs, just during the budget and budget system, budget adjustment period, and occurs during the analysis of the budget. So, needs and business system integration enterprise financial system, budget control in the business system, through the enterprise comprehensive budget management information platform, from the enterprise strategic planning, to the strategic planning, budgeting, goal decomposition to control budget, budget analysis report, examine the budget, and ultimately how to change the next issue of strategic planning, strive to achieve a closed loop [5].

### **Big data era of enterprise internal audit transformation**

Data should be comprehensive in corporate internal audit; whether the internal data, or departments, research institutes and other external data; Regardless of structured data, unstructured data. Enterprise internal audit must grasp all aspects of the enterprise, evaluation of enterprise comprehensive, more precisely determine the audit priorities; Enterprise internal audit must grasp the trend of data, not only to found problems now, but also can reveal the enterprise future development risks and hidden dangers. Internal auditors will be on data processing and analysis, determine the key useful information, to assist the effective internal management decisions [5].

**Change the way of the audit.** Using traditional audit sampling analysis, audit content is limited. If companies are still using the audit mode, for the validation of rapid development of the real value of the business activities or legitimacy too slowly; In addition, from the perspective of internal control, internal audit practice in China is mainly aimed at the financial and accounting activities, management, internal control, management, supervision, evaluation is very limited, the concept of audit activities is "supervision", not "service oriented" model, not much context relationship between departments of different processes, make audit work provides overall monitoring for economic activity and economic services become difficult [5]. Enterprise economic business is increasingly multifarious, make the information technology has rapidly development quickly and enterprise electronic commerce activities and the construction of the informatization has become increasingly mature, the importance of continuous auditing has been more attention and importance to, at the same time a large database technology made it possible to continuous auditing. If the continuous auditing, as a traditional audit time and delay problems will be reduced, the audit error and risk will be reduced, so as to promote the healthy development of enterprises.

**The audit sampling way transformation.** Audit sampling way become system, module and intelligent, and can predict the data trend, samples will be all of the data, not confined to a local [6]. The size of the audit risk and the size of the possibility of a major error is bound to each other. Usually the audit work mainly selects random sampling, although small, high efficiency. But conclusion error rate is big, that is, risk is big.

Computer processing is power and computation is faster and stronger. The advantages of using big data technology can improve the efficiency of the audit. Through the analysis of the database provided by the audit information system can complete the information of the auditors on data mining and the overall analysis of the financial and operating conditions were forecast analysis, providing the basis of decision-making [6]. A certain insurance company's audit system, for example, using big data technology selection of risk data, at the same time using a variety of sampling analysis on sampling method, thus greatly improves the efficiency.

But, for now the past days, with the real service as the main purpose of the development of the enterprise internal audit, and the depth of data information and technology maturity increases, explore

potential on the huge amounts of data of valuable information, to find the audited operation characteristics; To predict the future direction of the enterprise audit, on the whole grasp of the audited situation comprehensively.

**The transformation of the audit results and application.** At present, the application of internal audit work, mainly aiming at the problem of repeated key inspection, supervision and rectification, some companies start with a closed loop management way, manage the rectification process of the audit results, achieved good audit results using effect [7]. Big data technologies promote the further application of audit results.

1) Promote a lot in the previous audit and related data collection, the induction of information, find out the financial, the inherent law and trend of development of business and management, through summarizing the macro, comprehensive audit information, and use of audit results, provide data, correlation analysis and implementation opinions for leaders at all levels, in order to promote the improvement of the system and the decision-making, promote enterprise's management level to a higher level [7].

2) Found the problem in a comprehensive way and by analyzing the generality and universality, orientation, refining and the problem of data correlation, all issues can be detected by big data technology.

3) To the problem of continuous auditing, beneficial to rectification oversight.

4) Keep the audit results, through the use of big data technology, regularization problem solidified into the system at the same time, in order to calculate or estimate for better development trend, early warning problems.

5) Auditors and audit results and audit related issues and the audited, and the first information in the database, in preparation for the next check, can according to the audit plan, combined with the team of experienced auditors force, according to the corresponding audited audit target extraction inspection on the focus of the audit [7].

## Summary

The era of big data burst is an innovation, in a cloud platform, large data was born again. The emergence of big data has brought the financial management of disruptive change, for the accounting industry, is both a challenge and more opportunities.

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