Retraction

Retraction: Application and Management of Financial Sharing Under the Background of Big Data Era (J. Phys.: Conf. Ser. 1881 032024)

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This article has been retracted by IOP Publishing following an allegation that raises concerns this article may have been created, manipulated, and/or sold by a commercial entity. In addition, IOP Publishing has seen no evidence that reliable peer review was conducted on this article, despite the clear standards expected of and communicated to conference organisers.

The authors of the article have been given opportunity to present evidence that they were the original and genuine creators of the work, however at the time of publication of this notice, IOP Publishing has not received any response. IOP Publishing has analysed the article and agrees there are enough indicators to cause serious doubts over the legitimacy of the work and agree this article should be retracted. The authors are encouraged to contact IOP Publishing Limited if they have any comments on this retraction.

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Application and Management of Financial Sharing
Under the Background of Big Data Era

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Abstract. With the advent of the big data(BD) era, financial information and group financial management have shown new characteristics. BD technology also provides support for the construction of shared centers. The establishment of financial shared service centers is the future development direction of large and medium-sized enterprises. The purpose of this article is to study the application and management of financial sharing under the background of the BD era. This article is the development trend of financial shared service center under the background of BD. It briefly described the development and evolution of financial shared services, and pointed out the challenges and future development trends of the construction of financial shared service centers under the background of BD. This article discusses the principles, objectives, overall planning, specific design and issues that should be paid attention to in the construction of the group's financial shared service center under the background of BD. This paper proposes the framework model and process design of group capital management. Taking the framework model of the financial shared service center under cloud accounting as the core, build a group fund management framework model based on financial shared services under cloud accounting, and then further develop process design for fund budget management, fund control management, fund supervision and management, and fund assessment management. At the same time, it analyzes the causes of the group's existing personnel career planning and high operating costs, proposes solutions, and investigates the development trend of the financial shared service center. Research shows that the audit error rate of the financial shared service center of surveyed companies in 2014 was 1.27% to 0.57% in 2018. It can be seen that the audit error rate basically fluctuates, which further verifies that the financial shared service center has strict requirements for internal
management. The internal service level of the Financial Shared Service Center is continuously optimized and improved.

Keywords: Big Data, Financial Sharing, Cloud Accounting, Fund Management

1. Introduction
From the perspective of theoretical research, both BD and financial shared service centers are currently hot topics [1-2], and the research results in their respective fields are also relatively rich, but there are few literatures on financial shared service centers based on the perspective of BD. And this is a new trend in the development of financial shared service centers [3-4]. Combining BD and cloud accounting technology, analyze the group’s financial management problems objectively and objectively [5-6], focusing on the introduction of cloud accounting’s financial shared service center concept to build a corporate capital management model and realize financial shared services the research objectives of fund management under the model are of great significance to the development of Chinese enterprises [7-8].

In the application and management research of financial sharing in the context of the BD era, many scholars have studied it and achieved good results. For example, Du X analyzed the key technologies of BD processing and concluded that BD processing technologies mainly include the following Three aspects: data collection, storage, preprocessing, data mining and analysis [9]. Carlson S believes that cloud computing services are based on a thorough investigation and study of the terms and conditions provided by cloud computing providers, aiming to balance the legal basis of the cloud service provider and customer contracts, and therefore have greater flexibility than traditional outsourcing contracts Sex [10].

This article designs the group fund management process based on financial sharing services under cloud accounting from four aspects: fund budget management, fund control management, fund supervision and management, and fund assessment management. This article puts forward suggestions on the implementation of group fund management based on financial sharing services under cloud accounting, and strives to provide positive reference for more companies.

2. Financial Sharing Application and Management under the Background of BD Era

2.1. Group Fund Management Framework Model Based on Financial Shared Services under Cloud Accounting
(1) Fund budget management
The Group’s Financial Shared Service Center can use the receipt and payment realization system to prepare a capital budget, and predict the future capital flow as soon as possible on the basis of a certain probability. The capital budget management system under BD includes five aspects: budget preparation, budget execution, budget control, budget evaluation and knowledge formation. The group’s capital data resources are not limited to the logical expression of two-dimensional table structure, including current assets, inventory, and fixed assets. Such fund structured data, as well as semi-structured data such as XML HTML...
documents, and completely unstructured data such as image files, audio and video, these collected capital data resources lay a solid foundation for the group’s capital management.

(2) Fund control management

Internal financing means that the senior executives of the group's capital management department use the financial shared service center cloud accounting platform to raise idle funds within the group. The sources of idle funds include from the group and subordinate member units, but the shared center cloud accounting platform needs to be used to pay attention to this fund. The impact on the outflow unit and subsequent utilization, due to the group financial shared service center's control of the entire group's finances and the high sharing of cloud accounting platform, the characteristics of multi-faceted fund support services, better internal financing control; fund risk control in the group financial shared service center, it is mainly aimed at business capital turnover risks and capital operation risks.

(3) Fund supervision and management

For the part of capital management decision-making that requires personnel judgment, because the capital management department has many senior executives who are familiar with finance and business, and the cloud accounting platform of the group financial shared service center has a stimulating intuitive judgment mechanism to guide key issues, and the cloud accounting platform With the support of specific and reliable fund information, business tracking and fund management decision-making services, it will help the group's executives to carry out reasonable supervision, modification and supplementation of fund control management and fund budget management.

(4) Fund assessment management

The fund assessment team of the group financial shared service center can formulate fund assessment standards on the fund assessment management module of the cloud accounting platform, including absolute indicators, relative indicators, scoring, and indicator completion percentages. When the structured, semi-structured and completely unstructured data formed by the capital flow information of the group and its subordinate members are all concentrated on the cloud accounting platform of the financial shared service center, the BD correlation function of the cloud accounting platform uses homogeneity, Standards such as distinguishability and descriptiveness standardize massive amounts of data, which can confirm where the relevant responsible units and individuals have problems in the subtle details. Different responsible units need to be responsible for the corresponding financial responsibility indicators, which guarantees to a great extent the completion of the fund assessment standards.

2.2. Logistic Regression Algorithm Based on Financial Data Analysis

Suppose there are samples \( \{x, y\} \), \( y = 0 \) or \( 1 \), which is used to represent positive or negative classes, and \( x \) is a sample feature vector with \( m \) dimensions. Then for the sample \( x \) belongs to the positive class, that is, the probability of \( y=1 \) can be expressed by a function in the form of formula (1):

\[
p(y = 1|x; 0) = \sigma(\theta^T x) = \frac{1}{1+\exp(-\theta^T x)}
\]
Where $\theta$ is the parameter of the model, namely the regression coefficient, and $\sigma$ is the sigmoid function. Formula (1) can be obtained by the following logarithmic probability transformation:

$$
\log it(x) = \ln \frac{P(y=1|x)}{P(y=0|x)}
$$

(2)

$$
\ln \frac{P(y=1|x)}{P(y=0|x)} = \ln \left(\frac{P(y=1|x)}{1-P(y=1|x)}\right) = \theta_0 + \theta_1 x_1 + \theta_2 x_2 + \cdots + \theta_m x_m
$$

(3)

That is, as a dependent variable and related to multiple independent variables, these independent variables are expressed as $x_1, x_2, \ldots, x_m$. The weights $\theta_1, \theta_2, \ldots, \theta_m$ corresponding to these independent variables are the regression coefficients of the corresponding independent variables.

2.3. Combination of New Information Technology and Shared Service Operations in the Era of BD

(1) Establish a data warehouse

Combining with the needs of operation and management, by establishing a data warehouse, integrating standardized data information, relying on visual data display to provide high-quality financial information for users of financial information at all levels of the enterprise, and provide strong data support for decision-making analysis.

(2) Combine with cloud service model

The virtual FSSC through the financial sharing service cloud platform no longer requires a physical venue for on-site recruitment, on-site training or centralized office as usual. The company can rely on the network and cloud platform to achieve virtual operations, free from the shackles of geography and time, through the network and the cloud to complete personnel recruitment, remote training, etc., the payment of orders can be achieved through the cloud platform, the virtual center can further save the initial investment cost, so that the enterprise can obtain greater profit margins, and the reduction of personnel also makes operating costs further decrease.

(3) Strengthen the connection with artificial intelligence

The most obvious optimization of artificial intelligence technology to the financial shared service center is the automation of operations. FSSC is characterized by high standardization and large business volume. The application of artificial intelligence can fully understand and sort out the operating rules and realize the automation of financial sharing operations. The principle is that the business process of the shared service center extends to the front-end, and the front-end data collection function provides a large amount of data gold mines for artificial intelligence to mine and analyze. The combination of artificial intelligence and cloud technology can build a cloud enterprise, and the focus of enterprise operation is reverted to transaction management, the traditional financial processing process is reconstructed, and the transaction is finally transparent and orderly, the process is automatically processed, and the data is true and accurate. If the effective combination of artificial intelligence and FSSC is realized, the operators of the shared service center will be replaced by artificial intelligence. Further reduce the cost of human resources, making the company from a labor-intensive enterprise to a technology-intensive enterprise.
3. Experimental Research on Financial Sharing Mode under the Background of BD Era

3.1. Literature Research Method
After searching and consulting a large number of relevant literature materials, in-depth study of various literature materials, to understand the current research status of fund management, cloud accounting and financial sharing services, etc., lay a solid theoretical foundation for the research of this article.

3.2. Case Study Method
Taking a certain group in this city to the experimental object, appropriately using the Logistic regression algorithm based on financial data analysis to analyze its fund management status and existing problems, carry out the analysis of the impact of financial sharing services under cloud accounting on group capital management, and establish cloud accounting. The framework model of the group financial shared service center, and the construction of the group fund management framework model and process based on financial shared services under cloud accounting, and finally put forward suggestions for the implementation of group fund management based on financial shared services under cloud accounting, which can also be used for other companies in provide reference for fund management under the financial shared service model.

4. Experimental Research and Analysis of Financial Sharing Mode under the Background of BD Era

4.1. Financial Risk Control Is Strengthened
Strengthened the management and control of capital risks. The Group's financial sharing launched a centralized fund collection and payment system, established third-party payment cooperation, and expanded multi-channel and multi-mode fund collection and payment. The experimental data is shown in Table 1.

| Years | Successful payment (Million times) | Payment failed (Million times) |
|-------|----------------------------------|--------------------------------|
| 2014  | 816                              | 573                            |
| 2015  | 1694                             | 621                            |
| 2016  | 1997                             | 598                            |
| 2017  | 2673                             | 439                            |
| 2018  | 3382                             | 578                            |

Figure 1. Analysis of the success or failure of fund payment in the financial sharing service center of the insurance group
As shown in the Figure, we can reduce the risk of centralized receipts and payments through collective management of accounts; establish a fully closed system to automatically process related businesses and reduce non-system risks; implement multi-dimensional account balances, transaction parties, large-value capital transactions, etc. Supervision to avoid capital risks. The concentration and success rate of capital transactions have been greatly improved.

4.2. Audit Results of the Financial Shared Service Center

In 2014, the financial shared service center audit error rate was 1.27%, of which the internal audit error rate was 0.86%, and the external audit error rate was 0.41%. The financial shared service center audit error rate in 2018 was 0.57%, of which the internal audit error rate was 0.57%, and the rate is 0.37%, and the error rate of the detailed external audit is 0.13%. The experimental results are shown in Table 1.

**Table 2. Schematic representation of audit results of the Group Financial Shared Service Center**

| Years | Audit error rate | Internal audit error rate | Detailed external audit error rate |
|-------|-----------------|--------------------------|----------------------------------|
| 2014  | 1.27            | 0.86                     | 0.41                             |
| 2015  | 0.77            | 0.51                     | 0.25                             |
| 2016  | 0.81            | 0.58                     | 0.23                             |
| 2017  | 0.62            | 0.49                     | 0.17                             |
| 2018  | 0.57            | 0.37                     | 0.13                             |

Figure 2. Schematic diagram of audit results of the Group Financial Shared Service Center

As shown in Figure 2, the basic steady fluctuations in the audit error rate have further verified the strict requirements of the Financial Shared Service Center for internal management, which is also a manifestation of the continuous optimization and improvement of the internal service level of the Financial Shared Service Center.

5. Conclusions

With the vigorous development of information technology in the context of BD, financial shared service centers are widely used at home and abroad to promote cross-regional business expansion. FSSC can effectively integrate internal functions of the enterprise and provide customers with standardized, efficient and high-quality shared services, to ensure that the management of the group can grasp the financial situation of the branch in a timely manner, and the flat organizational structure also makes the transmission of information more
transparent and timely, which greatly enhances the group's management and control efforts and reduces the operating costs of the enterprise.

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