

# The application of big data in the enterprise financial management

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**Abstract:** In the information highly development, our country has entered the big data area. There is no doubt that enterprise has faced newest challenge and opportunities. In terms of financial management in the enterprise, manufacturing and marketing, equipment and human resources are all required to be considered. Data analysis derives from the development of information technology, it also can be applied for the financial management in the corporation. The application of big data in the financial management plays a significant role in assist financial decision-making to boost the high-quality development of the corporation. In this way, how to combine big data with financial management more deeply is an essential issue that should be focus on. Therefore, this paper aims to make analysis related to the benefits and problems that enterprises faced in promoting accounting information management under the background of big data era.

**Keywords:** big data, financial management, corporate management

## 1. Introduction

With the continuous information technological development, big data has widely applied into corporate financial management. As Kurt and Rita (2013) mentions that big data is a term that has an attribution in analyzing critical data and used to make business decisions, which can be regarded as a key to be success for an enterprise [3]. Generally speaking, big data refers to the enormous data generated by the business operation that is unstructured data from the enterprise resources. In order to acquire the useful information within the big data, hardware or software should be deployed to handle the data and make a real-time analytic. From the available literature review, Shaw, Rowland and Machova(2021)stated that big data already be used in financial forecast analysis, capital management, investment decision-making, etc [6]. Furthermore, Yuldashev pointed out that building information system can further improve the profitability of enterprises [4].

In terms of financial management, it focus on the organization of enterprise financial activities and dealing with the relationship of finance. In detail, big data technology provides accurate data analysis and financial forecast in the modern business management. Meanwhile, it improves the efficiency and effectiveness of financial data analysis as the daily operating business occurs. Based on the application of big data, it realizes the high-speed of data transmission and extraction. It largely promotes managers have a targeted decision-making basis. At the same time, as the development of big data, it avoids errors caused by human operation and improve the quality of financial management.

Particularly, the starting stage of the application of big data technology is the acquisition of data. The main data are sourced from the related staffs that generated during the business transaction. Then the business model of the system is established based on the characteristics of business activity and the enterprise's organization. Meanwhile, the evaluation and learning of the model should be implemented.

## 2. Analysis of the current situation of financial management

### 2.1 High demand of human resource

Regarding to the accounting procedure, it starts from the collection of invoices, audit the accounting documents, making the accounting entries, recording the journal and making the financial statement. This whole process requires several accountants in the whole process. In this way, company requires to hire the suitable staffs that invests a large cost on the human payment. It is obviously increase the

operating pressures of the enterprise and slow the efficiency of the financial accounting information transmission.

### ***2.2 Lack of data integration***

Even though, tremendous enterprises already make full use of big data to deal with the accounting practice in the financial management. Statistical analysis still be a complex process. In detail, accountants require to calculate the accounting ratio by manual operation. At the same time, they need to compare the results of accounting ratio with different years and the one of competitors. Apparently, the current accounting recording system fail to provide benefits in dealing with the data analysis in financial management. Hence, it is hardly for managers to get a full understanding of the essence of the business transaction and make a data-driven decision in operation strategy.

### ***2.3 Lack of focus on non-financial indicators***

Related to the division of the work, accounting staffs rarely concentrated on the non-financial indicators, such as customers satisfaction, risk evaluation, labour production rate etc. In fact, non-financial indicators has a closely relationship with the manager's decision-making. Based on the investigation of customer feedback or the risk evaluation, manager is more likely to get a clear information from the distinct perspective. It directly have an influence on the high-quality development of enterprise.

## **3. The significant of using big data in financial management**

Compared with the traditional enterprise financial management, using big data in financial management can embody the speed, accurate and value-add information under the information technology era. In terms of information technology, enterprises need to introduce advanced modern equipment and software. In this way, managers can get a comprehensive understanding of the business transaction and affect them to make a strategical decision which has a closely relationship with the development of enterprise.

### ***3.1 Improve the ability of financial analysis***

In the process of enterprise financial management, financial forecast management can make sure the efficiency of the cash flow in enterprise. Apparently, it directly affect the operating benefits of the company. Regarding to the traditional financial management, accountants tend to be lack of the innovation in budget management. Meanwhile, in terms of the real condition of the funding, the lagged analysis methods used by accountants fail to make all-round analysis. In this way, budget management can be influenced to large extent. However, as the application of big data technology, Ren mentioned that the data-sharing platform includes data access, cleaning, conversion and loading [5]. Under this situation, accountants can dig the information which hides behind the financial data and adjust the development decisions. Hence, the ability of making financial analysis is directly improved in the light of the intelligent financial system.

### ***3.2 Strengthen the ability of risk management***

At current stage, most enterprises have entered the big data era to deal with the financial accounting information. At the same time, the fierce competition in the market attract managers to pay more attentions on financial management. Specially, as the big data analysis technology is gradually applied in the accounting information era, the potential risk and operating flaws can be appeared at the first time. Due to the fact that all the financial data can be recorded that based on the actual business in the information system. On the basis of the different demands, related data models and algorithms are required to launch. The big data management accounting system can be required to calculate the significant financial ratio and make timely data analysis that depends on the business rules of the enterprise. In this way, it seems more convenient for managers to notice the alarming data and compare the current ratio with the average industry ratio. If the abnormal data occurs, the enterprise can take corresponding action to correct.

### ***3.3 Improve the efficiency of accounting information construction***

As the business expansion in the market, tremendous business data has increased the workload for the accountants to make accounting practices and data analysis. In the process of traditional financial accounting work, it requires to manual processing, collection documents, audit the corresponding voucher or receipts and analysis of financial accounting information. Obviously, it is a time-consuming and high labour intensive procedure, which directly result in the lower efficiency in the working process. However, with the continuous development of big data technology, technical staff are gradually adopting big data technology to launch the software, which can meet the demand of accountants to large extent. Meanwhile, it can comprehensively improve the efficiency of information management process for the business finance. Therefore, the big data technology plays an influenced role in promoting the effectiveness and efficiency of financial accounting management.

## **4. The challenges and problems that enterprises faced in the big data era**

### ***4.1 The challenges that enterprises faced in the big data era***

Based on the mainly characteristics and key technology of using big data and related software, it is timely to acquire the updated data that had be analyzed and delivered. In this way, financial staffs are able to dig out the potential values from the useful information. At the same time, by using technology of big data to make analysis in financial management era, enterprises are more likely to find out the negative extents which may threat the development of the company. In detail, if the ratio of the company's earning capacity is lower than the average in the industry, managers should make effort on researching the financial risk and reducing the avoidance cost. Apparently, it can better the lasting development of the enterprises.

In terms of the financial analysis era, the application of big data can closely bound the accounting procedure with the business transaction. Therefore, it is the biggest challenges that accounting industry faces. In recent years, tremendous companies are tend to make full use of information technology to realize the data mining and data analysis. Obviously, it is aligned with the opinion that Bhimani and Willcocks mentioned(2014) [1]. In this circumstance, managers can strengthen the risk management and improve the level of inner control. Especially in the financing activity, investing activity and operating activity. Big data can provide accurate and comprehensive data which can better managers to monitor the real-time business activities. Regarding to the risk accident occurs, data system can alarm automatically. As the merge of the big data in financial management with the business activity, it narrow the gap between the financial department with business department. Hence, the research of the meaning of data makes a significant roles in financial management. Financial staffs should illustrate the personal capacity to adjust the application of big data.

### ***4.2 The problems that enterprises faced in the big data era***

Even though the application of big data can boost the economy development, the safety of using the computer network should be mentioned. In fact, there is no doubt that it is really hard to guarantee the safety and stability of using internet. Meanwhile, it should be noted that the financial data is usually connected with the commercial secret and the development of the enterprise. Therefore, the safety and privacy issues are imperative that enterprise should focus on.

Moreover, as the development of big data technology, it provides advanced technical support for the realization of intelligent, real-time and remote financial information system. The information-based management model can be regarded as a lever, which can estimate the value of shareholders. At the same time, it can promote the transformation of the enterprises from management-based financial to value-based financial system. Under the value-based financial system, financial personnel will pay more attention and energy on value management and value creation. There is no doubt that the status of the financial sector in the enterprise has been largely enhanced. The new round of technological progress caused by big data has greatly promoted the transformation of financial management model.

Lastly, the most useful stage of financial management is the data analysis. Financial data analysis is an essential analysis that relies on the large amounts of financial data. Although big data technology provides strong support for the acquisition of data, it puts forward higher requirements for the financial staff. Meanwhile, financial data analysis is much more difficult as the big data application. In the previous, data calculation just takes advantage of the simple computing tools. However, with the use of advanced IT technologies, financial staffs should concentrate on improving their own capacity in

deploying data analysis technology. Due to the fact that the impact of big data has dramatically increase and they are now facing the swift pace of modification in their organization.

### 5. The innovative application of big data in enterprise financial management

Even though, the information value of big data is huge, the density value is relatively low. Therefore, the influences of big data is to mine the potentially valuable information by using big data technology. Particularly, business intelligence is using the data warehouse, data analysis, data mining and other advanced technology, which will transform a huge amount of data into knowledge rapidly and timely. Managers can make decision based on the information that dealt with by using the big data analysis. Nowadays, as the information explosion, if enterprises want to stand out in the fierce market competition, financial management is the core of enterprise management, which directly reflects the operating conditions of the enterprise. Therefore, in terms of financial management, the use of big data and statistical methods, rapidly and timely transform financial data into valuable information. It is essential to build financial management intelligent system in the corporate management, which successfully combines business intelligence with financial management.

At the same time, as the change of financial management model, the value-based management has gradually played a significant role instead of management-based management financial system. That is to say, financial personnel tend to concentrate on the value management and value creation. They should have a good understanding of the application of computer networks and the corresponding analysis work. In this way, they can acquire the ability of data processing and analysis.

Furthermore, in the era of big data, most enterprises tend to keep up with the pace in management development, especially in financial management. However, the statistical analysis is so complex which is largely applied in the big data analysis. In particular, statistical analysis includes logical thinking and quantitative analysis, which put forward higher ability for the financial personnel. That means financial personnel should not only have the relevant knowledge of finance, but also have the relevant knowledge of statistics. Apparently, many enterprise fail to have the relevant financial personnel who is familiar with statistics. Thus, it is necessary to organize the professional training from the perspective of statistical data analysis. It can directly improve the effectiveness and efficiency of the financial management.

### 6. Conclusion

In the information explosion era, the application of big data is gradually changing our work and life. Big data has created a close relationship between the business activity and financial management. The value chain created by big data presents various challenges that requires much research, because of the complex data related to the characteristics of the business activity [2]. However, compared with the traditional financial management, modern corporate management has comprehensively connected with big data technology, which enhances the cost management and risk management gradually. At the same time, managers can make full use of the real-time and accurate information that has been analyzed by using big data technology. Hence, the imperative role of financial management is closely tied with big data technology will become the core competitive in the enterprise's development. All in all, enterprise should have a prosperous development without the application of big data technology.

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