Financial Risk Control of Sports Industry Based on Big Data

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Abstract. With the widespread use of Internet big data, all walks of life are developing rapidly, among which the sports industry has also encountered new development opportunities and challenges. Based on the background of big data era, this paper studies the financial risk control of sports industry in the era of big data. This paper will first give readers a specific introduction to what is big data and let them know the main characteristics of the era of big data; then, it will analyze and further discuss the potential financial risks in the sports industry; finally, it will study the development of sports industry and how to control financial risks in the era of big data. In the analysis, this paper through the investigation of the development trend of the fitness industry, shows that there are risks in the fitness industry, and this risk is fatal to the fitness industry. Then, based on the background of big data, this paper puts forward corresponding suggestions on the risk control of the fitness industry, hoping that this study can provide certain reference for the healthy development of the fitness industry.

Keywords: Big Data, Sports Industry, Financial Risk, Risk Control

1. Introduction

With the rapid development of society, the pressure of modern people is more and more big, and then the decline of people's physical quality, so sports industry is more and more popular in recent years. With the delayed news caused by the lack of funds for the Tokyo Olympic Games, the sports circle and the financial circle were detonated. This news once again made people realize that sports and finance are inextricably linked. Compared with the sports industry, the financial industry has a wider range of fields, including but not limited to banking, securities, insurance, currency, etc. In November 2015, sports insurance was established. Sports insurance is the first whole process risk management platform in the field of sports health in China. It integrates sports all media through risk management business with innovative channel promotion mode, and builds a big data platform for sports service. This should be the beginning of the real link between sports and finance. The rapid development of
sports industry finance, followed by the sports industry financial risk control problem\cite{1-3}. How to control the financial risk of sports industry is of great significance to the healthy development of sports industry. Therefore, this paper studies the financial risk control of sports industry under the background of big data.

With the advent of the era of big data, our life has changed with each passing day, and our life has become more convenient and modern\cite{4}. Today's society is developing at a high speed, and science and technology are becoming more and more advanced and mature, which facilitates and strengthens the communication between people. Big data is the product of this high-tech era\cite{5}. McKinsey is the first to put forward the concept of "big data era". It is the top global management company. When the Internet of things and cloud computing develop to a certain stage, big data will be produced, or the Internet will inevitably produce big data\cite{6}. In the background of today's big data era, the pace of big data will be faster and faster, and the application of big data related technologies will have an impact on all aspects of our life, including transportation, office education, medical care, finance and other fields\cite{7-8}.

In recent years, the state has issued relevant policies to support the development of the sports industry. The sports industry will be rapidly integrated with "Internet++", "AL++", and "Internet of Things". The era of big data has just provided great assistance for this integration\cite{9}. However, the existing financial risks cannot be ignored. How to control these financial risks is what everyone in the sports industry should consider\cite{10}. Based on the characteristics of big data era, this paper analyzes the financial risk control of sports industry in the era of big data.

2. Characteristics of Big Data and Risk Analysis of Sports Industry

2.1. Big Data and its Characteristics

Big data is a data set, and the data in the collection cannot be collected, stored and managed by traditional data processing tools in effective time. It has three characteristics: multi-source, objective and dynamic. First of all, big data is multi-source. The essence of big data is the real individual, legal person and social body in the most natural state. Any person or enterprise is composed of multiple data sources, so if you want to truly understand consumers or enterprises, you need to integrate multi-source data and conduct multi-dimensional analysis. Secondly, big data is becoming more and more objective, because the data applicants will have different answers to the same question in different periods and facing different objects. Therefore, through more objective data, such as trace data, objective monitoring data is the future data research trend. Then, big data is dynamic big data, which is the integration of data from different sources. Each of us is changing every minute, so is the enterprise. Countless or enterprise databases are changing all the time, so the real big data is a dynamic database. Therefore, in the future, the General Administration of market supervision should also have an index that can reflect the current situation in real time.

2.2. Sports Industry and its Risk Analysis

Sports industry refers to the sum of all kinds of business industries based on sports resources, taking sports activities as the carrier and providing relevant material products and services to the society as
the source of income. Sports industry can be divided into sports service, sports supporting industry, specifically, sports service industry, sports goods industry and sports construction industry.

In the sports industry, the single sales mode of sporting goods enterprises brings great potential risks. For example, during the epidemic, the development plans of many small and medium-sized sporting goods enterprises were disrupted. Sporting goods in the new era of industrial change and development, in the context of economic globalization, has become more and more international. Many enterprises have accelerated the transformation from product management to brand management, and the influence of "Chinese brand" in the world capital market has gradually become. According to the survey, 80% of the sporting goods enterprises have international trade business of different degrees. However, with the aggravation of the epidemic situation abroad, many enterprises' export orders have dropped sharply, and domestic orders are also small, resulting in overstocking of stocks. In addition, due to factors such as delayed factory returns to work and logistics constraints, sporting goods enterprises have negative effects on procurement, production, transportation and delivery, and the pressure of capital chain and supply chain is increasing.

In addition, the fitness industry, like most service industries, has adopted the prepaid model. Annual card, private teaching, the moment you sell it, you will receive the cash flow for the next year or even three years, five years and ten years. However, it cannot be regarded as profit before, because in the next year or even several years, we will continue to serve this member. Once you encounter business difficulties, you will lose money.

3. Experimental Background and Investigation Analysis

3.1. Experimental Background

With the development of society, people's demand for sports is growing. Sports is no longer the patent of a few people, nor is it just for the needs of health products. With the industrialization of sports industry, sports have become a special consumer goods for entertainment. In order to meet the needs of people's growing sports consumption, more and more people are specialized in the production and management of sports service products, and more and more people have invested in the sports industry. However, as the saying goes, there are risks in investment, so we should be careful when entering the market, and we must pay attention to the financial risks existing in the sports industry. This experiment is also based on the actual situation, to understand how people view the sports industry, and to analyze the data obtained.

3.2. Experimental Process and Results

By means of questionnaire survey, the attitude of people around to sports and their views on sports industry are understood. The survey results are shown in Table 1. It can be seen from table 1 that only 52.8% of the people like physical exercise, and 32.1% of them are disgusted with physical exercise, while the rest do not express their attitude towards physical exercise. In addition, less than half said they did exercise every week, and more than half did not. As can be seen from the third row of the data in Table 1, 50.2% of the people will not use sports equipment while exercising, and only 33.1% will choose sports equipment to assist them in their exercise. 44.2% of the respondents chose to go to the gym for exercise, 31.5% refused to go to the gym, and 24.3% did not express their intention...
clearly. For Internet fitness, 61.7% of people expressed their approval, and 14.9% said they were not used to it. On the whole, there are not many people who like to exercise and are willing to buy sports fitness equipment, which is also a problem that sports goods enterprises need to think about and solve. In addition, for the fitness center, we are more willing to follow the fitness tutorial on the Internet to exercise.

**Table 1.** Questionnaire survey results of physical exercise

|                                             | yes     | no     | neutral |
|---------------------------------------------|---------|--------|---------|
| You like physical exercise                  | 52.8%   | 32.1%  | 15.1%   |
| You exercise every week                     | 45.6%   | 54.4%  |         |
| You will choose sports equipment to help you exercise | 33.1%   | 50.2%  | 16.7%   |
| If you exercise, you will choose to go to the gym | 44.2%   | 31.5%  | 24.3%   |
| Do you like Internet fitness                | 61.7%   | 14.9%  | 23.4%   |

4. Discussion

4.1. **Development and Risk Analysis of Sports Industry**

Through investigation and analysis, this paper gives the development trend of China's fitness clubs in recent years and the development trend of corresponding club members. The results are shown in Figure 1. As can be seen from Figure 1, before 2014, fitness clubs had a rapid development trend, but because of the risk problem, it declined sharply. Then, from 2015 to 2017, there was a stable and small fluctuation trend. At this time, the fitness industry was mainly stable. After 2017, with the development of the economy, the fitness industry will have a second round. The development trend of club members is similar to that of club, but the development of members does not exceed the development of club, and cannot meet the development trend of club. This brings a risk. Most clubs can't continue to receive new members, and the loss of some old members is fatal to the development of clubs. How to use big data to stabilize old members and increase new members continuously plays an important role in the development of clubs.
Then, this paper further analyzes the life cycle of gyms, that is, the time from opening to closing down. The results are shown in Figure 2. As can be seen from Figure 2, the vast majority of gyms cannot survive for 12 months. The reasons for the closure of these gyms are different: intensified competition, poor management, downward economic cycle, etc., but the result of these reasons is "cash flow exhaustion". We can use big data to find out what sports people prefer now, and then set up different personalized fitness studios for different groups of people. Compared with the traditional fitness club, personalized fitness studio does not have the price advantage, but it has to make its own
characteristics in environmental decoration and content service. When users gradually lose the freshness of monotonous strength training equipment and single jump exercise, they urgently need new content forms to experience. However, it is worth noting that the audience of the minority movement is limited. It is still necessary to select a theme sports category with relatively large market foundation after-market investigation, and then carry out refined operation. Only when it becomes the first in this category can it be remembered by the market.

4.2. Risk Control Strategy of Sports Industry Based on Big Data

The development space of sports industry is broad, and the national policy is also vigorously promoted. In 2019, the growth rate of domestic sports industry will be stable and the development momentum will be sufficient. The domestic sports industry has entered a period of steady growth. In 2019, the total scale of the national sports industry is 2.4 trillion yuan, with a year-on-year growth of 9.09%; the added value is 880 billion yuan, with a year-on-year growth of 12.82%. It is expected that the industry as a whole will continue to maintain a steady growth level in the next three years, and the added value of the sports industry is expected to exceed 1 trillion yuan in 2021. With the promotion of Internet, Internet plus sports + finance will bring more new opportunities to this field. But when we see opportunities and opportunities, we should also pay attention to the potential risks behind them. We think the risks mentioned above can be solved by the following methods:

First of all, for sporting goods enterprises, the risk of a single sales model. Enterprises can choose to transform. This transformation does not mean choosing new businesses, but choosing products that young people prefer nowadays. All are based on the preferences of target customers. Now the society has entered the era of big data, enterprises can find the preferences of most customers through big data, and then select products targeted for sales. We can also push product information to more people and tap more potential customers through the Internet. In addition, sporting goods will certainly develop to high-tech and intelligent direction, so relevant enterprises should also further change to the direction of science and technology and intelligence. With the upgrading of consumption, intelligence must constantly seek for dependence and breakthrough in the development of new materials and new attributes, so that products can have more personalized customization and more cultural connotation attributes, and meet more special needs. For example, the intelligent trail is for runners to better calculate the exercise time, kilometers, energy consumption, in order to achieve the best exercise effect. A single sales method will meet the bottleneck sooner or later, so we should choose a more diversified online marketing strategy. Both large sports brands and small sporting goods enterprises are trying to sell goods in more ways and paths, and expand the brand's activity and influence. Big data will screen potential customers on the Internet and sell their products.

Then, for the sports fitness enterprises in the case of great competitive pressure faced by the risk. Sports fitness enterprises need to use big data to analyze customer needs, set up corresponding fitness projects, introduce more advanced and more in line with customer needs of equipment, improve fitness environment, use big data to analyze customer needs in many ways, and then improve fitness club facilities, so as to retain old customers and attract more new customers.

5. Conclusion
The arrival of the era of big data has a great impact on our lives, which provides a powerful boost for the development of sports industry, and also promotes the development of sports finance. This paper mainly describes some characteristics of big data, such as its multi-source, objectivity and dynamic. This paper discusses and analyzes two risks of sports industry under the background of big data era. The first is the risk brought by the single sales mode of sporting goods enterprises, the second is the risk faced by sports fitness enterprises under the condition of great competitive pressure, and the corresponding suggestions are put forward for these risks. The era of big data can make the sports industry develop better and control financial risks more effectively, but this kind of risk cannot be completely eliminated. Therefore, investors should be cautious about the potential risks of sports industry. In the era of big data, while making full use of the opportunities brought about by the era of big data, the sports industry also needs to guard against the conclusions generated by excessive reliance on big data, and avoid making wrong decisions by blindly relying on big data, so as to reduce financial risks.

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