Retraction

Retraction: Application of Big Data Blockchain Technology in Financial Support of Real Economy (J. Phys.: Conf. Ser. 1955 012018)

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This article has been retracted by IOP Publishing following an allegation that raises concerns this article may have been created, manipulated, and/or sold by a commercial entity.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 of Big Data Blockchain Technology in Financial Support of Real Economy

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Abstract. In the era of big data, the development of Internet technology has caused earth-shaking changes and innovations in various fields of the financial industry. Especially in the financial market, big data has become an important research topic. It can accelerate the deep integration of Blockchain technology with the most advanced information technologies such as artificial intelligence, big data, and the Internet of Things, as well as the in-depth integration with the real economy, and innovatively solve the “trilemma” of difficulties in loan financing for small and medium-sized enterprises, difficulties in bank risk control, and difficulties in departmental supervision. It can provide a way for the application and innovation of Blockchain, and it can also provide assistance for the development of the financial industry. Therefore, how to make good use of big data and better integrate it into the operation of the financial industry is the primary issue at present.

1. Introduction
At present, people increasingly use big data to process information, and make decisions by analyzing massive amounts of data. In the financial field, the application of big data has become a trend, and it has been widely used and promoted in all aspects of the financial market. At present, China is actively advancing the construction and implementation of the Belt and Road as an important strategic investment project to promote rapid economic growth.

2. Introduction of Blockchain technology
Blockchain is a distributed and open data storage method. It analyzes the data information in the block and connects it with traditional physical data to realize the control and management of the entire system. In the financial field, the application of big data has become a problem that cannot be ignored. In other industries, the application of big data is also very important. Banks, insurance, securities, all require a large amount of transactions, and these are all done manually. For daily life, people generate a lot of uncertainty every day, so how to effectively solve this problem has become one of the current research hotspots. With the development and popularization of Blockchain, it has been widely used in all aspects. For example, investment decisions, financing arrangements, asset allocation, risk assessments, etc. in the financial market provide investors with a more accurate reference basis. At the same time, it can also improve the quality and efficiency of financial products, reduce costs, and increase revenue. It can also promote the upgrading of the industrial structure, so that the utilization rate of resources can be further optimized and improved.
3. Analysis on the current situation of big data Blockchain technology

At present, the application of big data is mainly concentrated in the financial field, such as banking, insurance, securities and other industries. However, with the development and popularization of Internet technology, more and more people are beginning to use mobile terminal devices such as mobile phones, which have provided convenience to lives. In the financial field, the application of big data has gradually penetrated into all aspects such as P2P network financing, crowdfunding, e-commerce small loans, consumer loans, utility bill payment, real estate mortgage, bill issuance, credit card repayment, investment and financial management. Through the above analysis, it can be seen that the emergence of Blockchain has greatly reduced the transaction cost of the financial market, and can effectively solve the problem of information asymmetry. In addition, due to its openness and sharing, it can better adapt to various needs, thereby promoting social progress and economic prosperity. Finally, because of its scalability, it has a wider range of applications, such as personal housing, car rental, stock trading, futures and some other derivatives. Therefore, in the future, the research of Blockchain technology will become a hot spot.
Figure 2. Three-wheel drive diagram in big data

4. Application measures of big data Blockchain technology in financial support for real economy
Finance is the core content of the modern economy. In the era of big data, how to effectively handle the relationship with the real economy is an important topic at present. In the traditional financial model, financial institutions often control the risk of loans within a certain range. For small and micro enterprises, due to their small scale and little information, it is difficult to obtain sufficient credit support. The application of big data Blockchain technology can solve this problem well. By using this technology, it can better reduce transaction costs, improve the efficiency of capital use, and reduce manual intervention to ensure the quality and quantity of financial products.

Figure 3. Application of Blockchain technology
4.1. Build a financial support real economy model in the context of big data

In the process of finance supporting the real economy, its main data model is the use of big data related algorithms. Through corresponding analysis and processing, a relatively complete model system of financial support for the real economy is obtained. On the basis of big data blocks, a relatively complete financial service model can be established, and the existing financial resource allocation can be optimized and improved on this basis. The financial support real economy model built through big data Blockchain technology can effectively solve the financing problems of the real economy and provide new ideas and methods for the development of the real economy. Under the data Blockchain technology, the existing financial information is used to integrate it to realize its management and analysis, thereby laying the foundation for the decision-making and implementation of the investment and operation of the entity enterprise.

When establishing a financial support entity model, it is necessary to filter the large amount of data needed, eliminate invalid data indicators, and remove some redundant data. According to the required sample size, it can select appropriate modeling tools, such as the use of probability density functions, statistical models of vector spaces to ensure the accuracy of the model. It needs to select appropriate parameters as input, and output these parameters to the P2P network to form a virtual credit system to evaluate the transaction behavior of the platform, and finally complete the operation of the entire project. There are mainly the following operating modes of financial support for the real economy based on blockchain technology.

It can establish a central database of big data in the transaction data of the financial market. Through this database, all financial institutions and individual customers can be analyzed, and this information can be recorded, thus forming a complete data chain for the entire investors in the financial market provide an effective reference basis.

Investment institutions in the financial market use the core technology of big data to give credit ratings to them and decide whether to continue lending based on the evaluation results.

4.2. Big data Blockchain technical framework

Using blockchain technology to effectively integrate and optimize financial resources in the real economy can improve the operational efficiency of the real economy to a certain extent, reduce transaction costs, and promote the development and prosperity of the real economy. In the financial field, the application of big data Blockchain technology is mainly reflected in the following aspects.

First of all, through the analysis and prediction of big data, the amount of information in the financial market has been greatly increased. Secondly, it can use big data to make reasonable and accurate judgments on the internal financial status and operating conditions of the enterprise, and make timely decisions. Finally, with the help of big data Blockchain technology, the capital flow, logistics and other businesses involved in financial institutions can be integrated into a unified platform to achieve interconnection between various departments, and at the same time, it can reduce regulatory issues between various industries to avoid kicking something back and forth like a ball phenomenon. The architecture of the big data Blockchain includes data sources, data storage structures, and data processing methods. In the construction of big data Blockchain, it can be divided into three parts.

It can establish a standard system of unified characters, centralize all transaction records in this system, and access to this information is also controlled by a unified platform. In this way, the relevance between the various participants can be guaranteed, and unnecessary losses caused by uncertain factors can be reduced.

Using a distributed computing model, the entire database is divided into multiple sub-libraries, and the weight of each sub-library is determined by a different algorithm, thereby improving the overall efficiency and accuracy.

Through the embedded machine learning technology based on the bottom layer, the members of each layer are connected with each other and cooperated together, which reduces the cost, and at the same time avoids the global error caused by a small local detail. This makes the allocation of financial resources more rational and achieve higher efficiency. Using Blockchain technology to effectively
integrate and optimize financial resources in the real economy can improve the operational efficiency of the real economy to a certain extent, reduce transaction costs, and promote the development and prosperity of the real economy. A big data platform can be established within the financial sector, and the transaction information of various financial institutions can be integrated and analyzed through big data technology, so as to realize effective supervision of the entire financial market. In the big data platform of the financial sector, using this system, different customer groups, such as consumption habits, income levels, purchasing power, investment preferences, it can be provided with corresponding personalized services to meet their diversified financial product choices. It needs to build big data cloud computing outside the financial industry to solve the problem of corporate capital flow, improve efficiency, and reduce costs. At the same time, it promotes economic development and innovation.

4.3. Big data development
Finance is a highly open industry and an emerging field, and its research directions are also very wide. However, in the era of big data, how to effectively process massive amounts of data has become a major problem. At present, the core technology of big data is to use existing machine learning algorithms to store massive amounts of information in existing models. By analyzing the changing laws of these data, conclusions can be drawn. This requires a large number of samples and corresponding knowledge bases, which is particularly important for the construction of large databases. The purpose of developing big data Blockchain is to solve the problem of information islands in traditional financial models. Through the mining and analysis of big data, transaction costs can be effectively controlled, risks reduced, and efficiency improved.

(1) It can use big data to make decisions after screening massive unstructured data. It is necessary to carry out in-depth processing of these massive data and convert them into valuable decimal point characteristic values, so as to realize their quantification and recognition. In this way, it can be better managed, and it can also predict market demand trends more accurately, and provide investors with more investment options.

(2) It needs to establish a database to facilitate the use of users in the financial field. The use of big data is becoming more and more widespread, but how to extract a large amount of unstructured, unsupervised, non-standard, incomplete or unsafe decimal point information, which requires us to have a professional technical team to complete. This platform is the Blockchain technology, so in the Blockchain technology, the core technology of the Blockchain is the division of blocks and the formulation of rules. For data processing, it is mainly through data analysis and mining. In the process of processing it, it needs to be stored in the corresponding database and realized by using related algorithms to convert this information into a digital data form, and choose the appropriate method to store it according to different situations on the corresponding platform. It can better improve the security and reliability of the data, and at the same time can reduce the degree of data redundancy and improve the operating efficiency of the system. In the big Blockchain technology, because the objects involved are the core content of the entire financial transaction. Therefore, in order to ensure that the services to be provided are more efficient and convenient, it is necessary to fully protect the privacy of customers. Therefore, the staff of big Blockchain technology is required to have certain professional knowledge, such as how to effectively protect the personal privacy of users.

(3) Consumer groups in the financial market regularly deposit their funds in banks, and then deposit them in other commercial banks or insurance and other financial products. This will not only improve consumer satisfaction, but also increase the sources of deposits and reduce the cost of savings. At the same time, it helps reduce risks and make their assets more secure. At present, China has initially realized the development trend of Internet +, which is a very important step for the future financial industry.
5. Conclusion
In summary, Blockchain technology integrates multidisciplinary professional knowledge such as mathematics and cryptography. The foundation of its application is digitization, and the financial industry is naturally a digital integration. Therefore, Blockchain technology has a foundation for extensive and in-depth application and integration in the financial industry. This article mainly introduces the relevant knowledge of Blockchain technology and analyzes the principles of Blockchain combined with actual cases. It can Blockchain technology to solve real-life financial services, including the construction of a social credit system, small and micro enterprise financing, inclusive finance, and practical applications in the trust industry, so as to achieve the optimization and upgrade of the entire system.

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