

The applications of Fintech in Accounting

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Abstract: With the continuous development of the social economy, the competition in the financial market is becoming more and more fierce. Traditional accounting and its methods can no longer meet the needs of the rapidly developing economy. Therefore, financial technology intervenes in the field of accounting with its advanced technology and rich information and computing power. This paper studies the specific applications, core technologies and principles of blockchain, cloud computing and big data in the field of accounting at the present stage. In this study, three methods are used to summarize the specific aspects, risks, technical problems and talent training of the three in real life. The technologies, application aspects and technical risks involved in the three are comprehensively enumerated and summarized one by one. This paper puts forward some suggestions for traditional accounting to eliminate the bias against relevant technologies, cultivate relevant talents and promote the improvement of efficiency and preciseness in the field of accounting.

1. Introduction

The essence of accounting is to provide complete, continuous and systematic accounting and supervision of the economic activities of enterprises and administrative and institutional units, using money as the main unit of measurement and employing special methods and procedures, with the main purpose of providing economic information and reflecting the fulfillment of fiduciary responsibilities. However, in recent years, with the rapid development of the social economy and the huge liquidity of the financial market, the traditional single-entry and double-entry bookkeeping methods are difficult to verify and lack transparency, making the application of financial technology in the field of accounting gradually take a place. Various technologies are now widely used in the field of accounting. This article will explore the technologies that account for the largest share of accounting and their scope of application, such as blockchain, cloud computing and big data, to gain a deeper understanding of their future direction and issues.

In the past, professors and researchers have conducted in-depth research on the application of financial technology in the field of accounting for a long time. However, it is limited to unilateral and deep-seated applications and risks. In this study, three financial technology technologies, blockchain, cloud computing and big data, which are relatively widely used in technology and application, are selected. Mainly through the study of Professor Cynthia Cai's two articles on blockchain and Professor tahmina Khanom's summary and summary of research on cloud computing [1]. The results of unilateral research on blockchain and cloud computing are obtained. And this study is to be analyzed and studied, summarized into a relatively comprehensive summary of the three technologies, applications, risks and future development. This paper puts forward suggestions and Analysis on how the society and relevant departments should do in the development of talent training in the accounting industry in the future.

The remainder of this paper is organized as follows. Section 2 describes the principles and main fields of application of the three financial technologies. In Section 3, we can use the previous description and application to capture the risks of applying these three techniques. In Section 4, we combine the previous risks and application fields, and give examples of three financial technology technologies in their application fields through their respective technologies. Finally, our main conclusions and corresponding policy recommendations are given. Finally, we give our main

conclusions and put forward some suggestions for talent training in the rapid development of the field in the future.

2. Research on three technologies and their application fields

Regardless of the industry, efficiency, integrity of transactions, transaction integrity and cost reduction are the basic objectives. The application of financial technology in accounting mainly includes internet technology (internet, mobile internet, internet of things), big data, artificial intelligence, distributed technology (blockchain, cloud computing), security technology (biometrics), etc. This paper mainly covers the application of blockchain, cloud computing and big data in the field of financial analysis and accounting.

2.1 Blockchain

Blockchain is a new model for the application of computer technology, such as distributed data storage, peer-to-peer transmission, consistent mechanisms and encryption algorithms. Essentially, it is a shared database. The data or information stored is "unforgivable", "fully traceable", "traceable", "open and transparent" and "collectively maintained" [2]. The openness of the blockchain is exploited in three accounting methods using the blockchain proposed by Professor Cynthia Cai of Macquarie University, Australia, in October 2019. In which digitally signed receipts backed up by financial encryption between two parties can be viewed through a shared third entry to avoid transaction fraud and reduce the redundancy of internal records.

In Cynthia Cai's research, because in the traditional accounting review approach each audit is an expensive and time-consuming exercise that requires verification and reconciliation of information between different parties. In addition, as it is not possible to audit all recorded transactions, auditors select a sample for audit based on the assessed risk, which is quite judgmental. Moreover, the seasonal need to present audit results to the various parties' results in a considerable lag time from start to finish. Allowing sufficient time for fraud to be committed. The probability of an audit going wrong is greatly increased. However, in its research, blockchain technology can be used to create a third-party ledger account that shares all information, thereby saving time and increasing efficiency in audits and also significantly reducing errors [3].

However, this is predicated on strong technology. At a technical level, blockchain applies two main technologies. Firstly, distributed nodes and consistency algorithms are used to generate and update blocks of data and link data according to time series. Secondly, ciphers are put together to ensure the authenticity and security of data information and prevent external conditions from tampering and falsifying data. As a result, the application simplifies the transaction process, secures it and ensures its authenticity. In this way, the entire transaction can only be included in the block once it has been confirmed that there are no errors and ensures that the transaction is not tampered with during the subsequent traceability process. At the same time, the nodes will maintain the stability of the entire account and ensure the security and authenticity of the transactions. All institutions and investors have the same status. There is no longer any need for party credit backing during the transaction and all party led accounts are used. This simplifies the trading process.

Besides, at the application level, blockchain is used in the above study mainly for auditing, security of instruments, but in addition, it can be used for transaction calculation and accounting [4]. In auditing, the basic evidence of the various vouchers in property accounting is reviewed and the evidence of all business transactions is stored in blocks, as the time nodes on each block will allow the transactions to be timed. It does not require traditional paper documents. The use of cloud computing can improve business agility and reduce operational and maintenance costs.

2.2 Cloud computing

Cloud computing is a service related to information technology, software and the Internet. This shared pool of computing resources is called a 'cloud'. Cloud computing aggregates many computing resources and automates their management through software. It requires very few people to be

involved so that resources can be made available quickly. In an overview by Tahmina Khanom from the Department of Business Administration of the leading university in Bangladesh, it is mentioned that in cloud accounting, data is sent to the 'cloud' where it is processed and returned to the user. All application functions are performed site rather than on the user's desktop, which eliminates the need for companies to install and maintain software on individual computers [5].

Therefore, in a cloud computing environment, the essence of accounting is to use cloud technology to build a virtual accounting information system on the internet to perform corporate accounting and financial management. Secondly, in Tahmina's summary, cloud computing can reduce labor costs and increase speed by collecting resources and automating management through software, as traditional accounting systems require manual changes to the information, whereas with cloud accounting, when new data is entered, it populates every location where it is needed. This saves time, money [5].

However, as a commodity, computing power can actually be spread over the internet. Resource-consuming products such as water, electricity and gas are easily available and relatively inexpensive. At its core is the coordination of large amounts of computer resources, enabling users to access unlimited resources via the Internet without the constraints of time and space. It has therefore been applied to classification processing, the construction of accounting education platforms and the use of school business partnerships to improve the authenticity of data without the need to find information in most data [6].

2.3 Big data

Big data technology refers to data that exceeds the processing capacity of traditional database systems. With the emergence of all kinds of big data on the Internet, data analysis is particularly important. It is a type of information technology. It allows the collection, storage and analysis of large amounts of data from dispersed sources and in diverse formats [7]. Financial Big Data refers to the effective application of Big Data technology in financial management through certain technical means. The use of Big Data enables finance staff to extract the most useful financial information from a wide range of financial data with complex structures in a very short period of time. It facilitates the development of accounting informatics and enables more accurate and timely assessment of partner and customer information. It can be used for data mining, data query and analysis, data storage and data security.

These three categories are all products of FinTech as a combination of traditional finance and emerging technologies. In our research, we can see that they are highly innovative and abstract, and some financial institutions may use newly developed financial technologies without fully understanding and experimenting with them in order to innovate the use of technology in their own business. Financial technology itself is the result of human use of technology to transform or innovate financial products and services, and there is bound to be the possibility of technical errors in its design process, and there is also the possibility of problems with the software and hardware used in the new technology, and if these risks are exposed in the transaction process, it will cause the relevant market players to suffer losses in interests and even affect the normal order of the financial market.

In the information age, customers' private information has become an asset with great potential commercial value, driving the booming development of financial technology. If financial institutions are ineffective in storing and storing information, or in the face of external organised large-scale hacking attacks, it can cause individuals and financial institutions associated with the information to suffer losses, and also adversely affect the stable development of the financial market.

So fintech itself is the result of human use of technology to transform or innovate financial products and services, and its design process may be subject to risks such as technical immaturity, algorithmic flaws and uncontrolled technology. Once the data and application environment are out of control, it will lead to a loss of control in the fintech market, which in turn will cause irreparable damage and may even have a more serious negative impact on the entire economy and society. Besides, the risks of the technology itself are reflected in all three technologies.

3. The risks of the technology

3.1 Blockchain:

In a blockchain public chain, every participant has access to a full backup of data and all transaction data is open and transparent. When participants and regulators want to know information about a business organization's accounts and transactions, all its wealth, important assets and trade secrets can be known through this account. There is no privacy. Furthermore, one of the main features of blockchain technology is irreversibility and irresistibility, but only if the private key is secure. The private key is generated and stored by the user without the involvement of a third party. Once the private key is lost, there is no way to manipulate the account's assets. With the development of new computing technologies such as quantum computers, there is a certain possibility of cracking asymmetric encryption algorithms in the future, which is also a potential security threat to blockchain technology.

3.2 Cloud computing: data security is not fully guaranteed

At present, most enterprises have great doubts about the data security of cloud computing. When an enterprise's accounting system uses the storage function of cloud computing, various accounting information, accounting vouchers, accounting books and accounting reports generated by financial activities will be separated from the enterprise's computer system and stored directly in the cloud, and these data may be modified, stolen and lost due to hacking or other reasons [8].

3.3 Big data: information security enhanced

Information security is a huge impact on the world. In the era of Big Data, a huge amount of information is collected from all directions. Using this information requires storage and downloading. However, much of the information is fake, even information with Trojan horses and viruses. After downloading this content, criminals may use it. In particular, the information stored in the accounting system will have many important elements. There is an urgent need to focus on how to avoid cyber information security issues, while using big data technology to protect information from being compromised.

After solving the technical problems, we will still face the problems of market acceptance, supervision by relevant authorities and imperfect regulations.

4. For example, of the problem

4.1 The decentralization and autonomy of blockchain are contrary to national supervision

It shows great advantages and forms high financial risks. How to effectively supervise is still a difficult problem in countries all over the world. Before the formation of a sound regulatory system, the development of blockchain and its future commercial application will encounter certain obstacles. Because major companies and relevant departments cannot guarantee their own rights and interests. Therefore, the market acceptance of blockchain will be relatively reduced [10].

4.2 The existing personalized functions of cloud computing are not perfect and cannot meet the special needs of large enterprises

Although the creation of private cloud improves the performance and expands the space available to enterprises, the relative rental cost will also be greatly increased. Only some specific large enterprises will adopt private cloud. Compared with private cloud, small and medium-sized enterprises will choose public cloud. The cost is relatively low, but the relative security is not very good, and the use of hardware and software cannot be optimized. At present, enterprises still have many concerns about the use of public cloud [7].

4.3 Big data because a large amount of data comes from the network

At any time, the information source of big data analysis itself is a big data product, which is likely to lead to a vicious circle. Google translation and other translation programs extract similar texts from different languages to identify the translation patterns of these languages. For example, the same Wikipedia entry has two languages. This is a very reasonable strategy. If there are not many languages that do not have too many similarities, Wikipedia itself can use Google translation to write entries. In this case, any error in Google translation will affect Wikipedia, which will be reflected in Google translation and strengthen this error. Therefore, most people questioned the data accuracy of big data and reduced its market acceptance.

This is a result of the concept, the cost effectiveness of the investment and the value of the information itself. Therefore, when looking at the development of FinTech from a future perspective, we should focus on the development of FinTech and accounting-related talent. In the above-mentioned article by Professor Cynthia Cai on Triple-entry accounting with blockchain: How far have we come? professionals and academic researchers have received insufficient training in blockchain concepts and infrastructures, and hence lack the necessary the same problem also arises in the use of cloud computing and big data [11].

Therefore, the training of future accounting professionals should be a combination of both subjects. This is because current practitioners in the accounting profession are trained under the accounting system and are not very proficient in the knowledge and use of financial technology. Although the application of technology in accounting helps to enhance the accounting work, some accounting practitioners are deeply influenced by the traditional concept of work and are very resistant to the application of financial technology. Practitioners are more likely to trust the conclusions they draw from their own experience than the results they get from the analysis of fintech, and do not attach much importance to the results of the data. In addition, some companies are not very supportive of the use of fintech in accounting due to the cost. As a result, there is still a long way to go before fintech can be used in accounting.

5. Conclusion

In this paper, we examine the specific applications of blockchain, cloud computing and big data in the accounting field and their core technologies and principles. We outline the specific aspects of their real-life application, the risks and technical issues they face and the issues of human resource development. The risks faced at this stage of technology are discussed in terms of each of the three issues. 1. blockchain privacy and immutability; 2. data security in the cloud; and 3. the problem of complex information and the Trojan horses it carries. This study enumerates the technologies, application aspects and technical risks involved in each of these three. It also discusses and organises three of the hottest FinTech technologies - blockchain, big data and cloud computing - and their application areas in accounting and the problems they face in mass adoption (low market acceptance, incomplete regulation and related laws and regulations, and customers' distrust of data and information). In the future. With the advent of the fintech era, traditional accounting models and tools are not suitable for the needs of modern business and economic development. Blockchain, cloud computing and big data are an inescapable part of the development in the field of accounting in order to make financial management more sustainable and efficient for companies and relevant authorities, so the issue of fintech and accounting talent training should also be gradually taken into account.

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