

Research and Analysis of Fraud Behavior in Audit Activities under the Background of Artificial Intelligence Development

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Abstract: Artificial intelligence has gradually entered our lives and work, and its high intelligence has brought us a lot of convenience. However, with the development of the times, fraud is also constantly changing, and from the current trend of artificial intelligence development, fraud is becoming more and more intelligent. Audit activities need to use artificial intelligence to reform and innovate so that auditing can keep pace with the times and curb the development of fraud. Limited to the author's ability and knowledge, this article puts forward views on artificial intelligence and fraud from two aspects: analyzing and solving problems.

Keywords: Auditing; Fraud; Artificial Intelligence

Fraud, as an audit term, refers to the intentional act of the management, governance, employees or third parties of the audited entity using deceptive means to obtain improper or illegal benefits. In today's information-based society, fraud methods are becoming more and more sophisticated, making it difficult for auditors to detect. With the continuous development of science and technology, artificial intelligence is gradually integrating into our lives, although this brings convenience to our lives, but also brings more ways for criminals to commit crimes. Audit activities can use artificial intelligence to make the work simpler and fairer. At the same time, when artificial intelligence is combined with fraud, then the conduct of audit activities will be extremely detrimental. Therefore, audit activities should focus on artificial intelligence and develop and take new anti-fraud measures in a timely manner.

1. Audit Activities Need to Focus on Artificial Intelligence

1.1 Why Should Audits Pay Attention to Artificial Intelligence

Some time ago, the artificial intelligence chat software "ChatGPT" exploded, as an intelligent tool, it can help us write homework, search for information, make suggestions ... Even imitating deceased loved ones chatting with us makes me marvel at the power of artificial intelligence technology today. If artificial intelligence can be well used, the anti-fraud measures of auditing will inevitably be further developed, for the following reasons: First, in the era of big data, smart tools such as computers and mobile phones have been popularized around the world, basically all companies and enterprises are inseparable from the computer Internet, with the continuous advancement of technology, auditing will also be developed, traditional audit tools may not be able to adapt to the future development needs. Moreover, most of the information materials of most enterprises are stored in computers, mobile hard disks and other places, the traditional work content has changed, audit has also derived computer audit, database audit, software audit and other new types of audit work that require the use of computers, which shows that only the traditional paper audit method can no longer meet the needs of today's social development, audit work urgently needs reliable and can deal with problems of artificial intelligence programs. Secondly, the audit workload is large, especially for fraud, often involves multiple steps, auditors need to analyze the psychology of fraudsters, but also pay attention to possible fraud links and find ways to find corresponding evidence, many problems are difficult to consider.

“Artificial intelligence” is actually the process of intelligent machines programming and designing programs according to human thinking to solve problems, and its essence is to use machines to simulate the way the human brain works instead of manual work to complete work. If artificial intelligence can be introduced to simulate the various thoughts and thinking of fraudsters and reproduce fraud processes and processes, then this will facilitate the work of auditors. Finally, with the development of society, labor costs are getting higher and higher, auditing, as a professional skill, not everyone can participate, which will inevitably produce a lot of professional labor costs; At the same time, a large amount of audit resources (including manpower, finance, technology, methods, etc.) will be consumed in the process of auditing. However, the application of artificial intelligence will certainly reduce a lot of difficulties, they will not increase labor costs, and can reduce the financial cost of a variety of audit processes, the audit work that originally required a group of people may now only need a few people and a machine, which will greatly reduce labor costs and reduce many inconveniences. If artificial intelligence can be properly used to help audit work, it will not only reduce the burden on auditors, but also reduce resource consumption and financial burden.

1.2 Possible Problems

Of course, there are pros and cons to everything, and if artificial intelligence is introduced into audit work, there will inevitably be many problems. If auditors can consider the advantages of AI, other employees of the company must also consider using AI to help them with fraud. As one of the most advanced technologies at present, artificial intelligence has mastered a large amount of knowledge and skills in human society, and they must know the relevant knowledge of auditing, accounting and fraud. When criminals use artificial intelligence to help themselves to fake, cover up facts and other illegal acts, things may become extremely difficult, and auditors may not be able to implement the right measures due to limited capabilities; Even if auditing activities are aided by artificial intelligence, and when companies also use artificial intelligence to commit fraud, no one knows whether the same artificial machine will be able to find and deal with the problem. At the same time, due to the influence of various factors, there will be many people who oppose the use of artificial intelligence, and they may oppose the use of artificial intelligence, or even hinder the development of audit work, which will be detrimental to the conduct of business activities. Secondly, as a machine, artificial intelligence has more demanding requirements for the working environment, unlike humans, they can work anytime, anywhere, even if the conditions are poor, audit work can be carried out; For machines, once they lose their power supply, they will not only be unable to work, but also lose unsaved data. If accidental or human influence on the power system causes artificial intelligence to lose power during the work process, this will slow down the work process. Finally, it is important to note that as intelligent machines, AI needs to know a large amount of data to analyze problems, which often involve multiple privacy issues. In the era of big data, if artificial intelligence is used to conduct audit work, various information in the audit process is likely to be leaked, which will inevitably affect the independence of the audit and give criminals an opportunity. The drawbacks of AI don't stop there, auditors should consider the pros and cons to make the most of it.

2. Anti-Fraud Analysis of Audit Work

2.1 The Emergence of Fraud in the New Era

With the development of the times, fraud has not disappeared, and even more and more. Taking China as an example, we can see from Figure 1 that since the 21st century, with the development of smart technology, the number of enterprises with fraud has increased, and there will be multiple fraud behaviors in the same enterprise. In the context of the development of artificial intelligence, fraud has become more and more numerous, which also shows the disadvantages brought by the development of science and technology, criminals will use artificial intelligence to obtain network information, personal privacy, company secrets, etc., making fraud easier to achieve and more difficult to detect. In my opinion, in the context of the development of artificial intelligence technology, fraud mainly has the following problems: (1) Intelligence, with the development of artificial intelligence, more and more companies and individuals have intelligent tools or intelligent software, the daily work of enterprises has been inseparable from computers, and corporate financial analysis tools are inseparable from

computer software. As long as employees have permission, they can use computers to easily change a piece of data and transfer a sum of money, and there is less news about corporate personnel moving money for personal gain? This shows that today's fraud is inseparable from intelligent technology, and intelligence is a characteristic of today's fraud. (2) Diversity, the development of artificial intelligence technology has brought us a variety of tools and software, fraud is becoming more and more diverse, through network technology, even outsiders can invade the company's account to achieve embezzlement, tampering with documents and other illegal acts. (3) Complexity, the application of monitoring, network permissions and other technologies makes traditional fraud difficult to implement, so fraudsters will use more and more complex methods to help them break the law. Fraud in the information technology environment requires a lot of data and business knowledge, and the psychological activities of fraudsters and environmental opportunities are important factors in the implementation of fraud. Considering the severity of punishment in today's laws, from the motivation of fraud to the implementation process, each step has to go through a lot of calculation and consideration, and the diversification of the subjects and means of fraud is also destined to the complexity of fraud in the new era. (4) Concealment, fraud is originally a hidden process, and fraud in the context of the current era with the help of computer and other artificial intelligence technology will be more hidden, only through inspection, observation and other basic audit procedures are difficult to find. At the same time, fraudsters often do not need to be physically present at the scene, they only need a mobile phone, a computer and the Internet to carry out criminal activities, and these frauds usually only change a small number or add or subtract a string of program code, which is difficult to detect without professional knowledge or careful inspection.

Fraud is now completely different from the era without the Internet and intelligent tools, which is a huge challenge for auditors. Although most auditors use computers to perform calculations and checks, it is obviously not a long-term solution to face the complex and ever-changing information world. Therefore, it is important to use artificial intelligence technology to help with audits and respond to fraud.

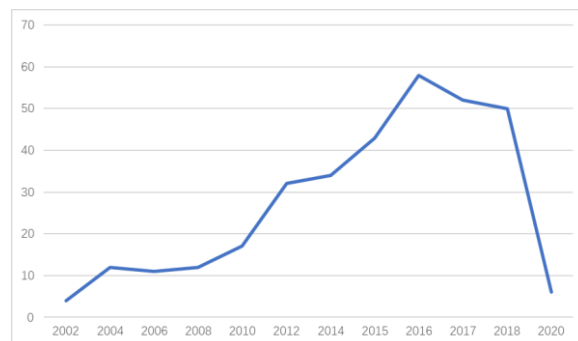


Figure 1 Number of enterprises experiencing financial fraud in China from 2002 to 2020
(Data for 2018-2020 are missing and the number is inaccurate)

2.2 Anti-Fraud Measures in the Context of Artificial Intelligence

Fraud often has serious consequences, as evidenced by the World Communications fraud case and the Enron incident. As an indispensable part of future audits, artificial intelligence should be fully applied in audits. With the rapid development of artificial intelligence today, how can we use artificial intelligence to help auditors fight fraud? Here are a few of my observations:

First, in view of the intelligent characteristics of today's fraud, artificial intelligence can be connected to enterprise databases and directly output the information and data needed by auditors, reducing the time spent looking for information. Fraud can be specifically divided into management fraud and employee fraud, and management fraud and employee fraud will have traces and signals, such as abnormal performance, personnel changes, account adjustments, previous records, etc., internal auditors may have a certain understanding of other personnel in the unit, and certified public accountant audits often need external personnel to work, they do not understand the relevant personnel and situation of the enterprise, moreover, whether it is internal audit or certified public accountant audit, if you want to investigate every incident, every person, It is

bound to be too much waste of time and energy. In the era of big data, the relevant events and personnel changes of the enterprise can be said to need to go through the network and computer, so the auditor can let the artificial intelligence tool connect to the network of the enterprise, output the business changes and personnel changes of the enterprise within a certain time range, which is equivalent to the auditor directly accessing the database of the enterprise, reducing a lot of unnecessary time. The intelligence of using artificial intelligence to deal with fraud can also become one of the methods of audit work in the new era. Considering the privacy concerns of enterprises, AI can only access relevant data and delete relevant data and records stored after the work is completed. Of course, the premise of all this is to communicate with the enterprise and obtain consent, if the enterprise does not agree and there are no special circumstances and the permission of the superior, the auditor should not invade the legitimate privacy of the enterprise.

Second, with the development of science and technology, fraud has become diverse, and there may be multiple fraud behaviors in each link, so auditors should pay attention to each work link and start from the details. In their work, auditors should focus on internal controls and analytical procedures to take advantage of AI's advantages. For the internal control link, auditors can use artificial intelligence tools to detect whether there are weak links in internal control and whether the internal control system is perfect, so that artificial intelligence can test the internal control of each work link. The focus of anti-fraud measures is to reduce or even eliminate fraud opportunities and increase punishment, so you can also communicate with the enterprise first, so that artificial intelligence is connected with the internal control system of the enterprise, and directly output relevant information to the auditors, so that no matter is missed, which can save a lot of time and resources for the auditors, whether it is employee fraud or management fraud can be detected, and it is also easier to evaluate the effectiveness and soundness of internal control. It is also conducive to the investigation and collection of evidence by auditors when conducting audit work; Analytical programs need to study and compare large amounts of data, and it takes a lot of time just to find information, which requires the help of artificial intelligence. As a kind of information technology, artificial intelligence can easily obtain the data needed for the job, and then use its powerful computing power to give the results of data calculation and comparative analysis within minutes or even seconds, and auditors can think about whether there is a problem and what to do next. For other issues in the work process, AI technology can also be used to help auditors.

Third, given the complexity of today's fraud, AI can better play its "intelligent" role in auditing work. According to W. Steve Albrecht's fraud triangle theory, fraud behavior is generated by pressure, opportunity and excuse, then we can start from here, since artificial intelligence can use human thinking to think about problems, therefore, in fraud audit work, artificial intelligence can be made to play the role of fraudsters, let it combine the specific environment and background, find out the role in life, work may have various pressures, analyze its psychological activities, and then analyze the internal control of the enterprise, The opportunities presented by the environment related to employee capabilities finally allow the AI to say the excuses it will use to commit fraud, list various reasonable scenarios, and thus infer the most likely scenario. Communicate with auditors as party members, which can greatly reduce the workload of auditors and allow auditors to better understand the situation and solve problems. It could also bring AI back into the role of auditor, allowing it to come up with ways to solve problems as auditors and make different recommendations for different types of fraud. At the same time, as a machine, as long as it has the Internet, artificial intelligence can quickly master a variety of business knowledge, such as computers, laws, psychology, etc., and comprehensively sort out the relevant knowledge, apply it to different fraud behaviors and personnel, and finally answer questions with the most rational and comprehensive thinking, and put forward various possible situations, so that auditors can consider all aspects and give auditors a broader range to think, which can also reduce the occurrence of errors.

Fourth, auditors can use artificial intelligence to track where a company's money is going. In the era of big data, the change of money and property of enterprises basically has to be completed through the Internet, bringing convenience but also giving criminals more opportunities for fraud, financial personnel only need to press a few buttons on the computer, you can transfer a large amount of funds, and afterwards will use a variety of means to cover up their behavior, fraud is becoming more and more difficult to find. At this time, artificial intelligence can play its role, enterprises can install artificial intelligence software in the central control system, so that it can manage and supervise the entire financial system, if unusual events are found, they can report to their superiors in time; When conducting audit work, if abnormal financial flows are found, it will

inevitably be troublesome for auditors to investigate and collect evidence, because most fraudsters will hide their whereabouts and delete records. However, with the help of artificial intelligence, the work will be much simpler, auditors can directly ask artificial intelligence “when, where, amount of capital flow, transaction account” and other issues, through the Internet to track the flow of funds in real time, do not need to ask the bank and the relevant personnel and companies to correspond, but also through the computer to find clues. This reduces many unnecessary steps and saves time and effort.

The changing forms and methods of fraud and the likely use of AI to commit crimes in the future doom audits with the help of AI. Although artificial intelligence can reduce our work pressure, we must also improve ourselves and improve our self-cultivation. At the same time, we must not rely too much on artificial intelligence, and we should not completely rely on artificial intelligence in major problems and core control. We must pay attention to the harm of artificial intelligence, both to realize that too much reliance on artificial intelligence may make our own knowledge wasted, but also to consider artificial intelligence may get out of control and other issues, after all, no one can guarantee that artificial intelligence will always be controlled by humans. However, I believe that the good use of artificial intelligence will definitely bring a qualitative leap forward to future anti-fraud activities.

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