

Development opportunities and challenges of financial innovation in the era of artificial intelligence

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Abstract: In the era of artificial intelligence, the rapid development of most industries, under the dual elements of science and technology and innovation, the financial industry has also ushered in his influence and challenges. Especially in the financial innovation industry, not only ushered in the technological innovation driven by the progress of science and technology, but also led a lot of regulatory risks and industry challenges. Therefore, this paper will discuss the positive impact of artificial intelligence on financial innovation as well as the opportunities and challenges from the analysis of the current situation and defect environment of financial innovation.

Key words: Artificial intelligence; Financial innovation; Opportunities and challenges

With the deepening of fintech and the rapid development of artificial intelligence, the combination of artificial intelligence and fintech has become an inevitable trend. However, in the current process of diversified and complicated science and technology and economic development, opportunities mean challenges, development means reform and innovation, and the road to innovation is full of infinite possibilities and risks. Based on the current status and opportunities of financial industry innovation under the background of artificial intelligence, this paper discusses how to break through the obstacles in this era of great waves and how to make the development of financial industry more standardized and efficient in the era of artificial intelligence, so as to avoid risks and seize opportunities.

1. The development status of Chinese financial innovation under the background of artificial intelligence

1. The meeting of development requirements

Chinese traditional finance industry has developed vigorously in recent years, but most of it is limited to traditional artificial calculation and execution power, inefficiency, artificial subjective influence or slow development will inevitably appear. And the introduction of artificial intelligence, the goal is fast and accurate, to achieve a number of links between the Internet and the financial industry, to make full use of the accumulation of massive data under the big data, is a necessary prerequisite for financial industry innovation, and Internet financial innovation in science and technology is the combination of artificial intelligence and scientific and technological innovation.

2. Maturity of technical conditions

The development of human science and technology cannot be separated from the progress of technology, and artificial intelligence is a huge breakthrough in scientific and technological development and progress. The rapid growth of artificial intelligence in recent years is closely related to computer algorithms. Applications of machine learning, neural networks and knowledge maps sift through vast amounts of financial data and complex information to identify risks and opportunities. Ai machine algorithms and math learning also enable targeted planning and countermeasures. This has provided detailed and clear supervision on many credit risks in the financial industry. In addition, the application of computer biometrics in financial risk avoidance is increasingly mature, which plays a pivotal role in combating telecom fraud and protecting customer privacy. For example, Baidu Finance (now renamed DuXiaoman Finance) began to make use of massive data, O2O and map combined artificial intelligence, to provide customers with more high-quality and satisfactory resource allocation, investment advice and other decisions; Major commercial banks have also applied artificial intelligence in credit services and information privacy protection, which has achieved good results.

3. The promotion of market environment

With the integration of information technology and industrialization, the manufacturing industry is also advancing rapidly in the spring breeze of The Times. It is deeply aware that the development of science and technology is the absolute truth. In this process, the artificial intelligence industry and the prevention of financial risks have a huge space for market growth and bright prospects for development. The prosperity of the whole economic market has laid a solid foundation for industrial cooperation in the field of artificial intelligence innovation in the financial field.

4. Support from national strategies

In the great strides forward of the national strategic policy, the situation of AI power game is taking shape. In such an environment, we are determined to cut overcapacity, promote the "supply-side reform" in science and technology, and vigorously support the development of science and technology for technological innovation. The financial industry is taking the lead and cannot be ignored.

2. The challenge of artificial intelligence to China's financial innovation

With the rapid development of artificial intelligence technology, its application has penetrated into every aspect of life, but there are still a series of challenges for financial innovation.

1. Data and programming errors

Data is the raw material, the program is the machine, the combination of the two precise cooperation can play a "1+1 is greater than

2” effect. Data collection and processing is a very important link in the process of financial analysis, which determines the correctness and accuracy of a decision to a large extent. Therefore, the quantity and quality of data must have a more stringent screening mechanism. And the data analysis based on artificial intelligence is to ensure the scientific and rational, if the program error leads to the result of over-fitting or irrelevant errors, it is also fatal to the whole financial risk control link. Although it is almost impossible for financial risk management to completely eliminate, control and optimization have always been the goal of risk control process.

2. Lack of independent research and development ability

National finance is related to the whole national economic system, and independent research and development ability is the cornerstone of expanding artificial intelligence combined with financial innovation. Although in recent years, technology and finance are also making great strides, we are clearly aware of the shortcomings and deficiencies of the combined development of artificial intelligence and financial innovation. As mentioned in the above analysis of the current situation, the development of science and technology in China has advanced by leaps and bounds in recent years, but there are still some lack of independent research and development ability and requirements of the standard is not in place, combined with the development of artificial intelligence financial management, is the direction we continue to conquer.

3. The problem of legality of information collection

In this era of information explosion, how to obtain more and more effective information without violating the privacy of individual customers, this boundary and scale need to be strictly controlled. As for the illegally obtained information and data, it is also illegal to use them in the actual financial risk management. Therefore, the legality of information collection should be strictly observed when collecting massive data. In addition, information asymmetry is also a major reason for the slow development of financial innovation. In the development process of the era of big data, there are some factors, such as lack of constraints on the platform, difficult for customers to protect their rights and low illegal costs, which make the data circulating in the market false and untrue.

4. Conservative attitude hinders development

The traditional financial industry still has a conformist mindset that refuses to change. In the long-term development of traditional financial management, they stay in the comfort zone, afraid of innovation and challenge brought by artificial intelligence, and afraid of taking unknown and risks. It is precisely this kind of thinking and practice of being content with the status quo that misses the development of internal and external supervision and technological innovation of the financial industry in the era of artificial intelligence.

5. Financial regulation is difficult

In the wind and waves of artificial intelligence, the relevant innovation in the financial industry is still in the preliminary stage of exploration. Various departments are in the process of research and development, testing and production, but unified technical standards and regulatory regulations have not been standardized. However, the combination of artificial intelligence and financial innovation has more possibilities, requiring more time and energy to research and development experiments. The ability of going it alone is limited, and the situation of operating separately makes the overall strategic goals of the financial system inconsistent, and the system is not completely compatible, so it is difficult to form a solid ecosystem, and cannot guarantee the sustainable success and stable development of innovation.

6. The employment environment is affected

Fear of being replaced by AI is a big part of the reason most professionals fear AI. Judging from the current development situation, the application of artificial intelligence in the field of financial risk management, in the enterprise direction considering the maximum efficiency, many basic positions are indeed gradually replaced, such as: basic investment consultant, credit risk analysis, credit rating, etc.

3. Suggestions on artificial intelligence innovation in China’s financial industry

Based on the above analysis of the status quo and challenges of AI in the field of financial innovation, the following suggestions are put forward for our financial industry:

1. Improve data screening and program design

If high-quality raw materials are needed, they need to be controlled from the source. For data collection and processing, rules and regulations should be strictly observed, abnormal data and deviation values should be handled within a reasonable range, and massive data in the database should be sampled and tested. In order to design a scientific and cutting-edge mathematical program, it is necessary to first establish the design principles with guiding significance, implement the consciousness and goals of designers as developers, and guide the whole process of the development, design, use, management and control of artificial intelligence. When developing and designing artificial intelligence, designers should ensure timely introduction of human inspection when errors occur in artificial intelligence, expand the opportunity for human participation, and avoid the expansion and derivation of errors.

2. Focus on R&D and customer privacy

For many financial institutions, independent research and development capabilities are often limited, so it is necessary for the state to step in. While providing certain policy tendencies and financial support, the government should coordinate close cooperation among various industries and information exchange within the legal scope, so as to enhance the precision of AI technology research and development and the development of the financial industry. In addition, at the same time, the guarantee of information and information security for financial innovation is also of great significance, for illegal channels to obtain customer information and data should be strictly regulated and vigorously punished, strengthen the illegal data sales and privacy infringement and other areas of law enforcement.

3. Strengthen supervision

For the healthy and efficient development of the financial innovation industry in the era of artificial intelligence, the regulation has been strengthened, and the requirements for the setting and operation of the financial regulatory system have become more stringent. Therefore, relevant departments should effectively understand the weak links in the development process, formulate corresponding laws and regulations, accelerate the adjustment of the management framework and management system, and ensure that when there is a major risk, the responsibility of each department is clear and quick to deal with it. In addition, China's financial technology development is also evolving, is still in the stage of feeling the stones across the river, the negative impact has not been fully exposed, along with the development of risk monitoring system and supervision is to keep pace with The Times, Chinese-style finance needs to find a suitable Chinese style regulatory method.

4. Talent cultivation

Although the development of artificial intelligence has replaced some basic positions in the financial industry to some extent, it does not mean that the introduction and training of talents in the financial industry should be taken lightly. On the contrary, the development of fintech innovation under the background of artificial intelligence urgently needs a group of forward-looking, broad vision and professional interdisciplinary talents. Therefore, both in the talent training plan of colleges and universities and the national talent introduction strategy need to pay attention to. Colleges and universities should not only emphasize relevant professional knowledge and theoretical learning, but also pay more attention to students' mathematical thinking and logical analysis ability, attach importance to industry-academic cooperation and school-enterprise cooperation, and open diversified interdisciplinary disciplines. The country should fully consider the internal practical needs of the innovation and development of fintech and put people first.

5. Develop a positive and correct attitude

In the context of the development of artificial intelligence, neither radical nor conservative, innovation comes from constantly seeking change and trying, can not be beaten passively, so whether in the innovation and development of artificial intelligence, or may be replaced by artificial intelligence under the threat of a correct and positive attitude. Moreover, at present, with the rapid development of artificial intelligence, we should actively improve ourselves and actively adapt to the changing environment. Due to the complex and changing specificity of the financial market, practitioners are required to have a clear understanding of the life cycle and limitations of artificial intelligence, give play to their own capital and talent advantages, and actively promote the dynamic combination of artificial intelligence and financial innovation.

4. Conclusion

The advent of the era of artificial intelligence and big data has broadened the spatial scope of Internet scientific and technological innovation, affected more groups and industries, and made financial life more closely connected with scientific and technological innovation. However, in the process of development, along with financial innovation comes financial risk monitoring, which is also an important beacon to standardize the financial industry under the background of artificial intelligence. Therefore, from the above aspects, this paper discusses the current situation and weak links of financial innovation and development under the background of artificial intelligence, as well as puts forward the aspects that should be paid attention to in the development process and what room for improvement. A perfect Internet financial development system must be explored and tested in the era to find out a path suitable for the development of our national conditions.

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