

# *Development Path and Improvement Suggestions for Traditional Financial Robo-Advisors under AI+Cloud Computing*

Yicheng Peng<sup>1,a,\*</sup>

<sup>1</sup>*Mergers & Acquisitions Practice, West Monroe Partners, New York, 10019, USA*

<sup>a</sup>*yicheng.peng0329@yahoo.com*

<sup>\*</sup>*Corresponding author*

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**Abstract:** With the rapid development of China's wealth management market, robo-advisors have attracted increasing attention. Despite the relatively mature foreign markets, China still faces issues such as low penetration rates and insufficient investor awareness. This study finds that robo-advisor platforms utilize AI technology to provide personalized investment advice and real-time portfolio optimization, combined with cloud computing to offer powerful computing and storage capabilities. Traditional financial institutions transitioning to robo-advisors face challenges in establishing technical architectures, optimizing algorithm models, and considering collaboration with third-party technology providers. Additionally, robo-advisors face challenges in product innovation, risk management, etc., requiring enhanced data processing capabilities, optimized algorithm models, strengthened system security, and personalized services. The advisory model is becoming a trend, focusing on investor interests and personalized services. FinTech supports advisory transformation through precise profiling, intelligent operations, etc., enhancing investor experience and returns. However, risk management remains crucial, requiring strengthened risk identification, assessment, and control. In conclusion, FinTech is supporting advisory transformation and enhancing investor experience, but the market still needs to address challenges, strengthen risk management, and achieve sustained healthy development.

## 1. Introduction

### 1.1. Background and Significance

With the rapid economic growth and continuous accumulation of residents' wealth, China's wealth management market is experiencing unprecedented development opportunities. As an important part of the wealth management market, public funds have shown a rapid growth trend in management scale in recent years. However, despite the expansion of fund scale, the issue of "funds making money while fund holders do not" remains prominent, to a certain extent, constraining the

healthy development of the wealth management market. Therefore, studying how to support the transformation of advisory services through financial technology (FinTech) to enhance investors' investment experience and returns is of great practical significance and theoretical value.

Robo-advisors, as a product combining financial technology with wealth management, have received widespread attention and application in recent years both domestically and internationally. By utilizing technologies such as big data and artificial intelligence, robo-advisors can provide investors with more precise and personalized investment advice and services, effectively addressing issues such as information asymmetry and high costs in traditional advisory models. Therefore, researching the current development and trends of robo-advisors and their impact on the wealth management market is of great significance for promoting the transformation and upgrading of China's wealth management market.

## **1.2. Overview of the Development of Robo-Advisors at Home and Abroad**

In foreign countries, robo-advisors started early and have formed a relatively mature market pattern. Taking the United States as an example, the fee-charging independent investment advisor consulting model based on asset size began to rise in the mid-1970s and has since developed into one of the largest advisory markets globally. American robo-advisor institutions have provided personalized investment advisory services for investors through the use of advanced technological means, achieving significant improvements in investor account performance.

In contrast, China's robo-advisor market started late but has developed rapidly. Since the issuance of the "Notice on Pilot Work of Publicly Offering Securities Investment Fund Advisory Business" in 2019 by regulatory authorities, the development of domestic fund advisory services has achieved significant results. Many financial institutions have laid out in the field of robo-advisors, enhancing the professionalism and efficiency of advisory services through the use of technologies such as big data and artificial intelligence. <sup>[1]</sup>However, compared with developed countries, the Chinese robo-advisor market still has certain gaps and shortcomings, such as low market penetration and insufficient investor awareness.

## **1.3. Research Objectives and Main Contents**

This study aims to explore how financial technology supports the transformation of advisory services, enhances investors' investment experience and returns by analyzing the current development, trends, and existing issues in the Chinese robo-advisor market. The research content mainly includes the following aspects: first, sorting out the development context and current situation of robo-advisors at home and abroad; second, analyzing the application of robo-advisors in the Chinese wealth management market and the existing problems; third, discussing how financial technology empowers robo-advisors to improve their service quality and efficiency; fourth, proposing policy suggestions to promote the healthy development of the Chinese robo-advisor market.

Through in-depth research and analysis of the above content, this study will provide useful references and insights for investors, financial institutions, and regulatory authorities, promoting the transformation, upgrading, and healthy development of China's wealth management market.

## **2. AI+Cloud Computing Technology in Robo-Advisors**

### **2.1. Overview of AI+Cloud Computing Technology**

The combination of AI and cloud computing has brought revolutionary changes to the field of

robo-advisors. AI technology, through methods such as machine learning, natural language processing, and deep learning, enables computer systems to simulate human intelligence, process and analyze large amounts of data, and make intelligent decisions. Cloud computing technology provides powerful computing and storage capabilities, enabling efficient data processing and sharing in the cloud.

## **2.2. Technical Architecture of Robo-Advisor Platforms**

The intelligent investment platform architecture includes data layer, algorithm layer and application layer. The data layer is responsible for collecting and storing all kinds of user data, and is cleaned and integrated to ensure that the data is accurate and effective. The algorithm layer uses machine learning and deep learning technology to conduct in-depth analysis and mining of user data. Through the operation of these high-end algorithms, the platform can generate highly personalized investment recommendations for users to meet their unique investment needs. At the same time, the algorithm layer also has the important function of real-time monitoring of market dynamics, which enables the platform to adjust the portfolio flexibly in real time according to the changes in the market, to ensure that the user's assets can steadily increase in value. As a bridge between users and the intelligent investment platform, the application layer provides an intuitive and easy to use interface. Users can easily complete registration, information entry and other operations through this level, and can always view the platform for their tailored investment advice, or according to their own needs to flexibly adjust the investment portfolio. The implementation of these functions undoubtedly greatly improves the convenience and experience of users using intelligent advisory services.

## **2.3. Application Examples of AI+Cloud Computing in Robo-Advisors**

Take the "Egg Roll Fund" intelligent advisory platform as an example, it uses AI and cloud computing technology to provide users with a more convenient integrated investment solution. Users only need to enter personal information and investment preferences on the platform, and AI algorithms will combine this information and historical data for in-depth analysis to generate investment strategies that meet user needs. At the same time, through cloud computing, the platform can continuously optimize the investment plan to ensure that users get a healthy return. In addition, the platform also uses AI technology to analyze and predict users' investment behavior, providing personalized risk warnings and investment guidance. For example, in the event of dramatic market movements, the platform will quickly advise users to adjust their investment allocations to reduce potential risks.

## **3. Traditional Financial Institutions' Development Path of Robo-Advisors**

### **3.1. Different stages of development of smart advisors**

The evolution of traditional financial institutions in the field of intelligent advisory can be divided into several key stages. Initially, they focused on data accumulation and technology foundation research and development, with the intention of cleverly embedding the innovative ideas of intelligent advisers into the existing business framework. Their main task during this period was to understand and explore the applications of this new type of investment advisory. With the advancement of time and the rapid development of technology, especially with the continuous progress of algorithms and models and the gradual maturity of the market environment, traditional financial institutions have begun to promote the practical application of intelligent advisors more

deeply. By introducing more sophisticated and complex algorithmic models, they have significantly improved the accuracy and execution efficiency of investment decisions, which also marks a new stage in their application in the field of intelligent advisory. Today, we are pleased to see that the smart advisory services of traditional financial institutions have evolved from providing basic asset allocation advice to being able to customize highly personalized investment strategies based on the unique needs and preferences of clients.<sup>[2]</sup> This shift is undoubtedly a major milestone in the development of the field. We have reason to believe that driven by cutting-edge technologies such as big data and artificial intelligence, the intelligent advisory services of traditional financial institutions will develop in a more intelligent and automated direction. This will enable them to make more accurate and efficient investment decisions, thereby providing customers with a better and more intimate investment service experience. This prospect is undoubtedly expected, and will also open up a new world for traditional financial institutions in the fierce market competition.

### **3.2. Analysis of Key Factors in the Development Path**

In the process of traditional financial institutions actively exploring and developing intelligent investment platforms, several core elements have played a pivotal role. We must emphasize the importance of data, which is seen as the cornerstone of intelligent advisors. Over the years, traditional financial institutions have accumulated vast amounts of customer and investment data, which not only covers various types of investment behavior, market dynamics, but also the individual needs and preferences of customers. It is these data that provide valuable information resources and analysis basis for intelligent investment advisers, making investment recommendations more accurate and personalized. Technology is the key driving force to promote intelligent investment advisory. In order to stay relevant, traditional financial institutions need to constantly adopt and apply the latest technologies, such as advanced techniques such as machine learning and natural language processing. The introduction and application of these technologies can significantly improve the analysis ability, decision-making efficiency and user experience of intelligent advisers, so as to bring more intelligent and convenient investment services to users. In addition, the strategic thinking of cooperation and win-win has also played a non-negligible role in the development of intelligent advisors. Traditional financial institutions know that it is difficult to cope with the rapid changes in the market and the rapid development of technology on their own.

### **3.3. Challenges and Opportunities in the Development Path**

The rapid update and continuous iteration of technology forces these organizations to stay vigilant and keep up with the latest technological trends in order to maintain a place in the fierce market competition. At the same time, with the increasingly fierce market competition, traditional financial institutions should not only provide basic services, but also work hard on service quality and customer experience, and retain those picky customers through continuous optimization and innovation. In addition, changes in regulatory policies are also factors that cannot be ignored. These policies could have a profound impact on the direction and speed of the development of smart advisers. Therefore, traditional financial institutions need to have a pair of keen eyes and pay close attention to every adjustment of the policy to ensure that their operations are always on the track of compliance. However, just as a coin has two sides, challenges often hide great opportunities. As the smart investment market continues to expand and mature, traditional financial institutions will have the opportunity to capture more development opportunities in this blue ocean. As a new service model, intelligent investment advisory can not only help traditional financial institutions improve the quality and level of customer service, better meet the diversified needs of customers for wealth management, but also effectively reduce operating costs and improve work efficiency, thus creating

more business value for institutions. It is worth mentioning that the emergence and application of intelligent investment advisors will also strongly promote traditional financial institutions to carry out deeper innovation and transformation and upgrading in the business. This not only helps the institution to stand firm in the current market environment, but also lays a solid foundation for its long-term development in the future.

## **4. Issues Analysis of Traditional Financial Robo-Advisor Platforms**

### **4.1. Customer Service Issues**

Traditional financial institutions' robo-advisor platforms have some issues in customer service. The targeting of customer groups is often not precise enough, lacking detailed segmentation of different customer groups, thus unable to provide personalized investment advice to customers. At the same time, customer experience needs improvement. The user interface of the platform is not user-friendly, and issues such as cumbersome operation processes can make customers feel inconvenient during use. There are also some problems with the slow response speed of customer service. When customers encounter problems, it is difficult for them to get timely and effective answers and help, leaving a negative impact on customers.

### **4.2. Product Innovation Issues**

Traditional financial robo-advisor platforms face challenges in product innovation, mainly reflected in the following three aspects. First, the variety of products is relatively single. Currently, most robo-advisor products on the market are mainly public funds, lacking diversified investment targets, and unable to meet customers' diversified investment needs. Second, the innovation of products is insufficient. Traditional financial institutions have a relatively slow pace of innovation in the field of robo-advisors, lacking breakthrough innovative products. Third, there is a serious homogenization of products, with little difference between products of different platforms, lacking unique competitive advantages.

### **4.3. Risk Management Issues**

Traditional financial robo-advisor platforms face several challenges in risk management. The primary issue is the insufficient accuracy of risk assessment, using relatively simple assessment methods that fail to fully reflect customers' real risk levels, which may lead to investment advice not matching customers' risk preferences, increasing investment risk. Secondly, there is a lack of ability to monitor the risk status of investment portfolios, making it difficult to timely discover and deal with potential risks. Additionally, it is necessary to strengthen the prevention and response capabilities to external risks to better cope with risk challenges brought by market fluctuations, policy changes, and other uncertainties.

## **5. Suggestions for Improvement of Traditional Financial Robo-Advisor Platforms under AI+Cloud Computing**

### **5.1. Technical Improvements**

At the technical level, for the improvement of the traditional financial intelligent investment platform, there are the following specific suggestions. First, the platform should focus on enhancing its data processing capabilities, which means not only improving the speed of data processing, but

more importantly, ensuring the accuracy of data. In the current age of information deluge, fast and accurate access to market data is extremely critical.<sup>[3]</sup> At the same time, algorithms are the core of smart advisors, and the platform needs to continuously improve its algorithm model of smart advisors to provide customers with a better service experience. Good algorithms can keenly track market changes and provide precise guidance based on client needs to develop customized investment plans for each investor. At the same time, ensuring the security of the system is also crucial. The platform must fully protect the privacy and data security of customers and guarantee the personal privacy of each customer. In the market environment where network security risks are increasing, only by continuously improving the security factor of the intelligent consultant platform can users rest assured that they can use our platform without fear of personal information disclosure or network attack. Continuously improve our intelligent advisory system, so that investors can get more comprehensive and professional investment advice when using, so that they experience an efficient and easy investment process, improve satisfaction.

## 5.2. Risk Management Improvements

Traditional financial intelligent investment platforms need to enhance risk identification, risk assessment and management capabilities. To this end, it is critical to establish a comprehensive risk assessment framework that provides an in-depth analysis of the risks of investment products while accurately assessing the tolerance of users. This dual evaluation strategy ensures that the investment products recommended to users are in line with their risk tolerance, thereby reducing investment risk. In addition, it is also essential to strengthen real-time monitoring and early warning of market risks, which may require the use of cutting-edge AI technology to analyze market dynamics in real time, in order to detect possible risks as early as possible, timely warn investors, and take risk prevention and control measures when necessary to maximize the protection of investors' interests. Finally, it is equally important to establish a sound internal risk control system, which involves setting rigorous risk management policies and clearly defining risk management responsibilities and powers at all levels to ensure the efficient operation of risk management.<sup>[4]</sup> At the same time, a risk isolation mechanism is established to prevent a single risk event from having a significant impact on the entire platform operation. Through the implementation of these measures, the security and stability of the platform operation can be ensured, and a reliable and safe investment environment can be provided for investors.

## 6. Conclusion

The buy-side investment model is gradually showing its important trend status in the development of China's public fund market, and the core force to promote this change is non-financial technology. Looking back at history, we can see that with the rapid expansion of the scale of public funds, investors are increasingly eager to obtain higher investment returns and better investment experience. However, it is regrettable that the phenomenon of "fund profit and base people loss" is common, which undoubtedly exposes the contradiction between the traditional sales model and the interests of investors. Because of this, the inevitable trend of the development of the industry is to shift to the buyer investment model with the interests of investors as the core. Of course, we must not ignore the pivotal role of fintech in promoting the transformation of investment banking. With the help of advanced financial technology means, investment advisory institutions can more accurately depict the customer portrait, realize intelligent operation, and then provide more efficient and accurate investment services.

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