

Research on the Development Direction of the Robo-Advisor Platform in China ——Compared with the Robo-advisor Platform in the United States

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Abstract: In recent years, the personal investable assets of Chinese residents have continued to increase rapidly, and emerging technologies such as big data, cloud computing, and artificial intelligence have also continued to penetrate into China's financial sector, promoting the reform of wealth management methods. The traditional investment advisory model of "high threshold and high fees" can no longer meet the development needs of inclusive finance in China. Robo-advisor platforms with significant advantages such as low thresholds, low fees, and high information transparency have emerged in China. This article comprehensively elaborated the current development status of the robo-advisor platform in China, and compared the development history, asset scale, and user situation of the U.S. robo-advisory platform, and concluded that during the development of the robo-advisor platform in China, there are problems such as narrow range of optional investment targets, low intelligence, unstable profitability in the short term, insufficient attractiveness of the platform to investors, and relatively weak risk control capabilities. On this basis, combined with the experience and practices of typical U.S. robo-advisory platforms, it proposed to enrich the types of investment targets, configure the optimal investment portfolio, adopt the human-machine combination model, improve the accuracy of user portraits, establish differentiated business strategies, optimize decision-making models and technical algorithms, strengthen investor education and protection, promote the cooperation between robo-advisory platforms and licensed financial institutions, improve the information disclosure system, and improve the legal supervision system.

1. Introduction

In March 2016, the U.S. Financial Industry Regulatory Agency (FINRA) released the "Digital Investment Advice Report", in which the basic definition of robo-advisors was explained. According to the FINRA research report, Robo-Advisor is a value chain that uses financial tools to provide professional investment consulting services. The service chain can be decomposed into customer feature analysis, asset allocation, investment portfolio construction, transaction execution, portfolio rebalancing, and tax loss reduction. Comparing with seven functions of portfolio analysis, asset allocation and portfolio selection are the core of the service chain. Subsequently, the U.S. Securities and Exchange Commission (SEC) pointed out in the "Robo-Advisor Supervision Guidelines" in February 2017 that: robo-advisors use innovative technologies such as big data and network intelligent algorithms to provide customers with discretionary wealth management services. In addition to the official definition of professional institutions, foreign scholars have also put forward their own views on the definition of robo-advisors. Kinder.G (2015) believes that robo-advisors can use artificial intelligence technology to provide users with diversified investment portfolio solutions, which is a combination of man and machine. Monica C.Meinert (2017) proposed that robo-advisors are not simply a replacement for traditional models, but smart financial management tools based on big data. Dominik Jung (2017) pointed out that robo-advisors are online automated investment advisories, which bring many conveniences to banks and customers.

Compared with the United States, the development of robo-advisors in China is still in its infancy. At present, there is no official definition of robo-advisors. However, in recent years, many scholars have made theoretical and practical explorations and concluded about robo-advisors. Definition. Wei Zhaochun and Xu Jiangang (2018) added the theory of behavioral finance to the concept of robo-advisor and gave a more comprehensive definition of robo-advisor. They believe that Robo-Advisor is a comprehensive use of artificial intelligence, big data analysis, quantitative trading, behavioral finance and other theories and technologies, combined with investors' risk preferences, property status and investment goals, and establish models through algorithms to provide investors with personalized Investment advice and automated investment transactions, and then make intelligent adjustments based on market changes and investor conditions, to achieve a wealth management tool or service model that rebalances the investment portfolio. The robo-advisory platform is an emerging platform that provides the public with this wealth management tool or service model. It provides asset management with many advantages such as "low fee rate, low threshold, wide asset allocation range, and strong risk control." Industry innovation and development inject new vitality.

2. The Development Status and Problems of China's Robo-advisory Platform

2.1. Started Late and the Platform Went Online in a Short Time

Compared with developed countries such as the United States, China's robo-advisory platform started relatively late, and the development of the entire industry and platform is not mature enough. In 2015, some emerging robo-advisory platforms were officially launched in China. Typical robo-advisory platforms such as Wealth Cube, Micai, and JD were launched in 2015-2016. After that, traditional financial institutions were deployed in this direction. The launch of China Merchants Bank Capricorn Intelligent Investment in December 2016 marked the official involvement of China's commercial banks in the field of robo-advisory. At present, most of China's robo-advisory platforms have been online for a short time, and the domestic robo-advisory industry is in an early stage of development.

2.2. The Overall Development Trend is Rapid and the Market Potential is Huge

Although robo-advisors started late in China, their development speed is amazing. As shown in Figure 1, the scale of asset management of China's robo-advisory platforms has leapt into the top five in the world, and is currently second only to the United States. Other countries account for a relatively small proportion. Therefore, the focus is on comparing the situation of Chinese and American platforms.

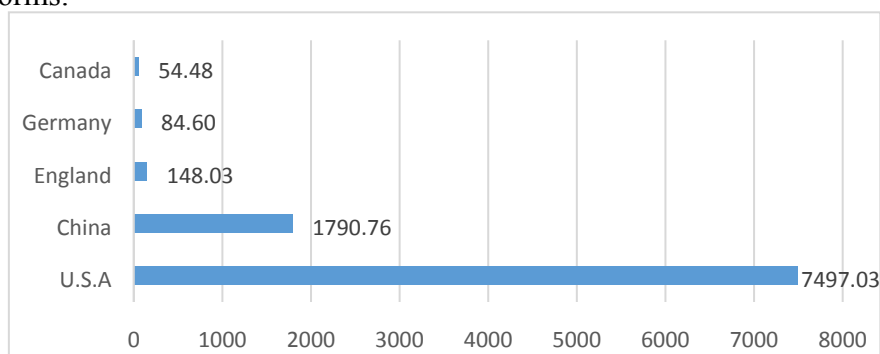


Figure 1. Ranking of global robo-advisor assets under management (unit: US\$100 million)

Figure 2 shows the comparison of the scale of robo-advisory asset management between China and the United States from 2016 to 2022. It can be seen that the total amount of robo-advisory assets in the United States has obvious advantages. In contrast, China, although the domestic robo-advisory field was only involved in 2015, Driven by technologies such as big data, cloud computing, and artificial intelligence, China's robo-advisory platform is developing rapidly. As shown in Figure 1, after calculation, the growth rate of the asset management scale of China's robo-

advisory market in 2017 was as high as 213%. , The growth rate is amazing. At the same time, from the data in Figure 2, it can be calculated that the average annual growth rate of China's robo-advisory assets from 2016 to 2022 is 97.1%, while that of the United States is 56.3%. This clearly shows that China's smart investment The growth rate of investment advisory platforms is still considerable, with huge potential in the future. In addition, according to Figure 2, it is predicted that by 2022, the asset management scale of China's robo-advisory platform will increase to 669.613 billion U.S. dollars, which is nearly 60 times that of when it started in 2016. This shows the rapid development of China's robo-advisory platform.

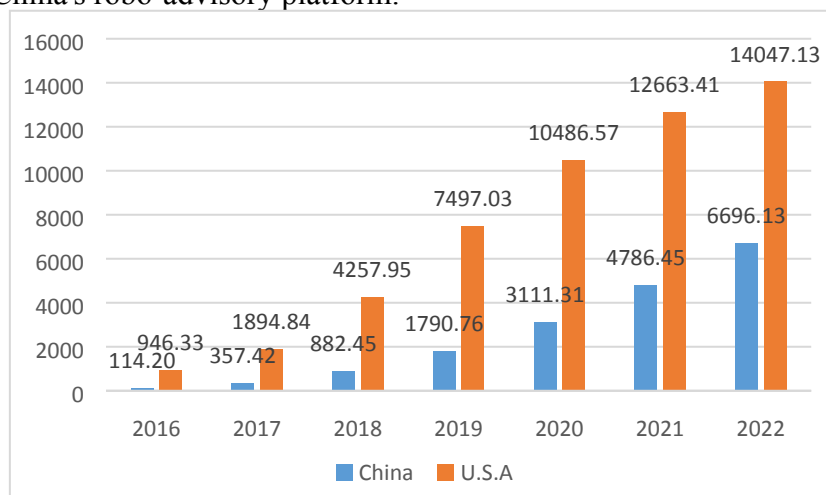


Figure 2. Comparison of the scale of asset management of China-US robo-advisory platforms from 2016 to 2022 (unit: US\$100 million)

2.3. The Distribution of Customer Groups Tends to be Younger, and the Actual Participation of Users is Low

The main customers of the US robo-advisory platform are the "millennials." Taking Wealthfront as an example, according to Wealthfront's official website statistics, the company's service targets are mainly "millennials" young people, more than half of which are under the age of 35. China is no exception. According to the 2017 China Electronic Banking Network survey, as shown in Figure 3, from the perspective of user age distribution, the number of users born in the 1980s is currently the largest among Chinese robo-advisor users, accounting for 49.8%; those born in the 1970s rank second. It accounted for 23.1%; the post-90s accounted for 19.9%; the post-60s and post-50s accounted for less, 4.8% and 2.5% respectively. As the current younger generation, especially those born in the 80s and 90s, have grown up with the popularization of the Internet and artificial intelligence, they have a high degree of acceptance of smart financial management, which has given "robo investment advisors" based on artificial intelligence technology. A large amount of market demand for products.

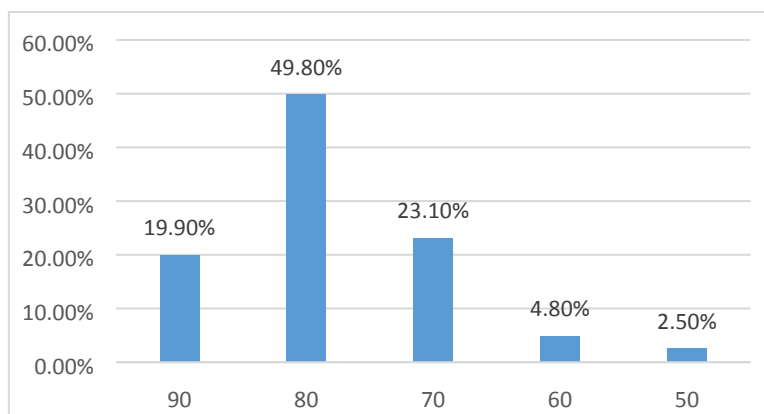


Figure 3. Age distribution of Chinese robo-advisor users

In addition, it is worth noting that although the number of people covered by robo-advisors in China is increasing significantly, and more and more young people are experiencing the emerging wealth management services of robo-advisors, the actual participation of Chinese robo-advisors is still low, and it may be even worse. Many users are just trying or waiting. As shown in Figure 4, the scale of assets invested by users of China's robo-advisory platform has not changed much in recent years. As of December 2018, the scale of asset management by users of China's robo-advisors has been insufficient. One-tenth of the United States.

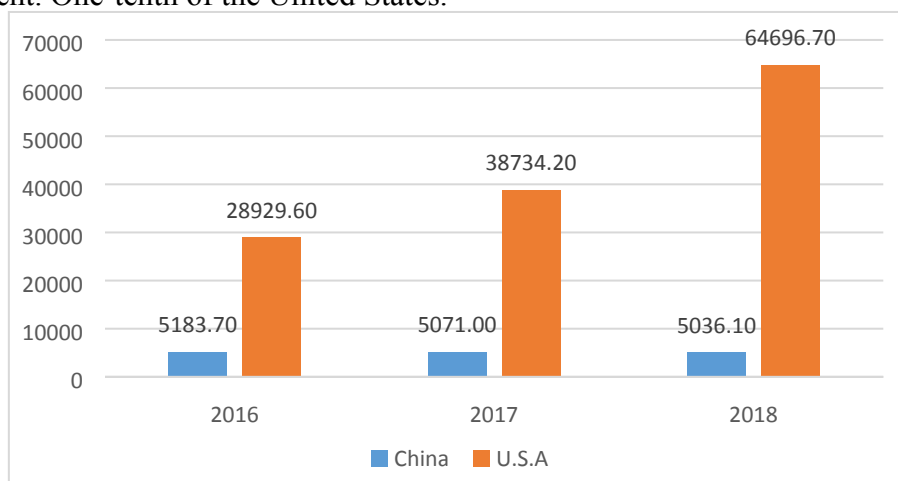


Figure 4. 2016-2018 China and the United States robo-advisor unit user input asset scale (unit: USD)

2.4. Multiple Platform Models Coexist, and the Investment Targets are Mainly Public Funds

There are many participants in China's robo-advisory market. Since 2015, a number of new venture robo-advisor platforms have emerged. Later, third-party wealth management institutions, early Internet financial platforms, and traditional financial institutions such as banks, brokerages, insurance, and funds have also emerged. In a variety of modes, in just three or four years, robo-advisory platforms have blossomed everywhere. Just like the coexistence of multiple models of China's Internet financial platforms, China's robo-advisory platforms are also relatively complex, with various classification methods. According to the time of its platform launch, combined with the depth of its robo-advisor products and implementation methods, It is divided into three modes: full intelligent investment advisory model, internal intelligent advisory model and semi-smart advisory model.

2.5. The Ability to Build Optimal Investment Portfolios Needs to be Improved

The robo-advisory platform combines Internet wealth management, big data and artificial intelligence. It relies on the advantages of low threshold, low fee rate, high efficiency, and high transparency to achieve the optimal combination of risk and return, and to a certain extent, it can effectively avoid P2P the high risk of the platform and the decline in the volatility of the return rate of baby products. The robo-advisory platform provides allocation of different types of assets and investment advice according to the risk tolerance and investment goals of investor groups of different age groups and different income status. In addition, due to the high degree of specialization and strategy execution of robo-advisors, most of the asset allocation schemes given are based on the classic asset allocation theory, and have fixed threshold settings. When the stop loss and profit margins are reached, they will automatically Operation; this kind of automatic rebalancing of the investment portfolio can effectively overcome human weakness without the user's operation. At present, China's robo-advisory platform is still in its infancy. Although robo-advisors can theoretically optimize investment portfolios with the help of automatic rebalancing technology, the lack of investment targets of domestic intelligent platforms, immature model algorithms and many other factors affect the most The real effect of optimizing the construction ability of investment portfolio still needs market test. However, in the long run, the robo-advisory

platform is committed to providing investors with the optimal solution for the investment portfolio and providing inclusive investment advisory services for Chinese long-tail customers. This will effectively fill the gap in the field of wealth management in China and achieve real Meaning of inclusive finance.

3. The Development Direction of China's Robo-advisory Platform

In recent years, the U.S. robo-advisory platform has led the rapid development of global robo-advisory. It has an absolute advantage in the number of platforms and market share, and it is also superior in terms of technology. Therefore, it has borrowed from Wealthfront, Betterment, Schwab Intelligent Portfolios, Personal Capital's four typical U.S. robo-advisory platforms' experience, practices and characteristic services provide suggestions for the optimal development of Chinese robo-advisory platforms.

3.1. Enrich the Types of Investment Targets and Configure the Optimal Investment Portfolio

The asset allocation of China's robo-advisory platform should focus on providing a diversified portfolio of assets, and allocate a variety of investment targets such as commodities, debt, equity, and currency in the fund pool to reduce the relevance of major assets and reduce the risk of stock market Losses caused by fluctuations. At the same time, further accelerate the development of the ETF market, optimize the design of ETF products, and actively deploy industry index and thematic index ETFs around the relevant hot topics such as artificial intelligence and 5G and the industry sectors that investors focus on to meet the risk preferences of different investors. With diversified investment needs, increase the diversified selection of investment targets for robo-advisors, and configure the best investment portfolio.

3.2. The Use of Man-machine Combination Mode to Improve the Accuracy of User Portraits

At present, China's robo-advisory platform is more suitable for the development model of human+machine. Experienced and professional human investment advisers are responsible for raising or answering some key questions for investors. There are various specific communication methods, including video, email, telephone, Online chat and other forms ensure the accuracy of first-hand data, and provide rich customized scenarios based on diversified financial goals based on the intelligence of customer information and decision-making models.

Domestic robo-advisory platforms should actively learn from foreign advanced practices, formulate characteristic survey questionnaires based on their own development, improve the humanization of the system and survey content, and enhance user experience. Survey questions should be designed more extensively and penetrate into the real life of investors Among them, it is convenient to build a more complete user portrait. The platform can also use the method of binding investors' different capital accounts to more fully grasp the investor's income and expenditure details, realize the sufficiency of first-hand data, improve the accuracy of user portraits, configure a more reasonable investment portfolio for users, and provide Targeted and personalized service.

3.3. Establish A Differentiated Business Strategy, Optimize Decision-making Models and Technical Algorithms

At this stage, the domestic robo-advisory platform fee model needs to be further refined, to establish a differentiated business strategy, and to layer the fee model. In addition to charging the management fee of the investment subject, it is also necessary to clarify the platform's own consulting fees and management fees, etc. High, medium and low net worth customers can set different charging standards and provide different service models. For high-net-worth customers, the platform configures a personalized portfolio of large-scale assets and provides a high-frequency human-machine combination of professional consulting strategies, charging a certain percentage of consulting service fees based on asset scale; for mid-end users, real-time monitoring and Human consultants regularly consult to configure asset portfolios and charge low fixed service fees; for low-net-worth users, the platform provides inclusive public wealth management products and

services without consulting service fees. At the same time, various robo-advisors must fully tap their own platform characteristics, establish their own product advantages, cultivate core profit points for competition, and actively seize market share.

In addition, domestic platforms should use advanced technologies such as big data and cloud computing to develop smarter investment portfolio decision-making models, and build a diversified and in-depth intelligent investment advisory platform, so that the platform can determine the return rate and fluctuations of various investment targets based on market information. Rate for accurate forecasting. The financial technology professionals at the back-end of robo-advisors must continue to debug the system, make full use of the information advantages of the data age and the application of artificial intelligence in machine learning, and update and improve the operating system and improve the operating system through the combination of artificial investment and machine investment. The model algorithm provides investors with better asset allocation. The core algorithm model is filed with the regulatory authority. During the operation process, when the algorithm model has major amendments, the platform should re-disclose and file it to the regulatory authority to avoid the problem of homogeneity of the core algorithm and model, so as to achieve thousands of people. Technology provides investors with more intelligent and diversified services.

3.4. Strengthen Investor Education and Protection, and Provide Diversified Services

On the one hand, the robo-advisory platform must actively do a good job of online risk warnings, set up some humanized tips in the system, or configure a simulation animation of the operation process for users to watch before filling out the questionnaire. When the user encounters a technical term that he does not understand during the operation, he can give the user a corresponding explanation through the system prompt, so as to prevent the user from making random choices because of ignorance of the problem. When designing the questionnaire, the platform should also consider it as far as possible from the perspective of investors to make the questions and answers more accessible.

On the other hand, robo-advisory platforms should strengthen the guidance of investors to establish long-term investment concepts, but be careful not to stop at verbal publicity and education, and let investors truly appreciate the harm caused by short-sighted behavior. User behavior data should be fully tracked, and the platform regularly publishes research reports after thorough research, and uses real data to tell investors the impact of short-sighted behavior on earnings. You can also use the Robo-Advisor platform to set up some relevant knowledge online courses and case studies on the platform for users to learn, improve user risk prevention awareness, and effectively guide investors to establish long-term investment concepts.

In addition, the robo-advisory platform can learn from the development experience of advanced foreign platforms to provide investors with diversified services, enhance user stickiness, and to a certain extent increase investors' acceptance of robo-advisory platforms. The robo-advisory platform can provide customers with investment and financial management in housing, education, medical care, tax saving, pension, etc., so that customers can obtain more humane value-added services through the robo-advisory platform, and further optimize their asset allocation. Customers provide customized financial planning to make them truly appreciate the convenience brought by robo-advisors.

3.5. Promote Cooperation between Robo-advisory Platforms and Licensed Financial Institutions

At present, many emerging robo-advisory platforms in China have not obtained relevant license qualifications. In order to avoid regulatory red lines, robo-advisory start-up platforms can actively cooperate with qualified traditional financial institutions, not only domestic financial institutions, but also can expand their horizons to foreign countries. An advanced platform, in this way, can also provide users with investment advice on a global scale, and it will be more convenient to introduce some advanced foreign experience to improve the development level of China's robo-advisory platform.

3.6. Improve the Information Disclosure System and Improve the Legal Supervision System

First, the industry information disclosure system should be improved. In order to protect the rights and interests of investors and enhance product transparency, the regulatory authorities must supervise the robo-advisory platform to fully expose investment risks, release the profit and loss of products in a timely manner, and also need to give detailed information on the investment portfolio, and strictly abide by the data traces. Manage, do not delete data without authorization, protect investors' right to know, and strengthen investors' trust in the robo-advisor platform.

Second, establish a credit reporting system for the robo-advisor industry. This requires the platform to regularly publish rating reports to relevant departments and users, and set up a special agency to score the platform and investor behavior, and enhance the level of information disclosure.

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