ISSN: 1813-4890

Research on the Impact of Digital Finance on Household Financial Asset Allocation

Yueyue Zhang

School of Anhui University of Finance and Economics, China

Abstract

With the healthy and stable development of the national economy, China's residents' household assets are growing rapidly, and the structure of asset allocation is developing from a single savings type to multiple types. Currently, the research perspective of family finance mainly focuses on the micro level, and with the continuous improvement of the micro database, the relevant research has been very detailed. However, as an important part of the economic and social operation of the family, changes in macro-factors will also have an impact on the economic behavior of the family. Therefore, it is of great significance to study the impact of changes in the external environment on the asset allocation behavior of households beyond the internal household. Based on this, this paper selects digital inclusive finance as an important external factor to study its impact on household financial asset allocation behavior. It is of great significance for enriching the research content of family finance, optimizing the allocation of family financial assets, promoting the innovative development of financial institutions, and providing a practical basis for the implementation of relevant policies. The study shows that: firstly, digital financial inclusion has a positive effect on the financial asset allocation of households; secondly, digital financial inclusion is more effective in enhancing the asset allocation of households in the eastern region and urban areas. Based on the above conclusions, this paper puts forward the following suggestions: (1)Strengthen the publicity and education on risk science and improve the financial literacy of residents;(2) The government should vigorously promote the development of digital inclusive finance; (3) Strengthen the supervision of digital financial activities.

Keywords

Digital financial inclusion, household financial assets, portfolio theory.

1. Introduction

1.1. The research background and significance

1.1.1. Research background

With the rapid development and popularization of information technology, digital inclusive finance, as a new model of financial services, is rapidly emerging worldwide. Digital inclusive finance provides more convenient and flexible financial services for the originally marginalized groups by using advanced technical means, such as mobile payment, electronic banking, big data analysis, etc. The rise of this trend not only brings new development opportunities for the financial industry, but also has a profound impact on the financial behavior of individuals and families. As the core content of individual family financial management, financial asset allocation involves many factors such as family members' risk preference, income level, investment cognition level, etc.

Therefore, it is necessary to study the impact of digital inclusive finance on household financial asset allocation. An in-depth study of the impact of digital inclusive finance on household financial asset allocation will not only help to better understand the changes in financial behavior patterns in the digital era, but also help to promote the deeper application of digital financial technology in serving ordinary people, and promote financial inclusion and financial accessibility.

1.1.2. Research significance

theoretical significance:

First, through in-depth analysis of the relationship between digital inclusive finance and household asset allocation, it is helpful to expand the research scope of financial behavior theory. Under the framework of traditional financial theory, the rise of digital inclusive finance may have a new impact mechanism on the financial behavior of individuals and families, thus providing a new thinking and research perspective for financial behavior theory.

Secondly, studying the impact of digital inclusive finance on household financial asset allocation is helpful to enrich asset allocation theory. The traditional asset allocation theory mainly focuses on the portfolio composition and risk management strategies of households. However, the emergence of digital inclusive finance may produce new influencing factors on asset allocation preference, risk perception and investment decision-making process. Therefore, studying the impact of digital inclusive finance on household asset allocation is helpful to further improve the theoretical framework of asset allocation and put forward new theoretical assumptions and analysis models.

Finally, through theoretical discussion and research, it can provide theoretical support and guidance for the development of digital inclusive finance. An in-depth understanding of the impact of digital inclusive finance on household financial asset allocation will help to promote the deeper application of digital financial technology in serving ordinary people and promote the development and innovation of financial technology.

Practical significance:

From a practical point of view, it is of great significance to study the impact of digital inclusive finance on household financial asset allocation. First, through in-depth understanding of the impact of digital inclusive finance on household asset allocation, it can provide a basis for government departments to formulate financial policies. By encouraging the development and popularization of digital financial technology, the government can promote the universality and accessibility of financial services and promote financial inclusion.

Secondly, studying the impact of digital inclusive finance on household financial asset allocation will help financial institutions to better serve their customers. Financial institutions can adjust the design of financial products and services based on the research results to meet the needs of different customer groups and improve the quality and efficiency of financial services.

Finally, an in-depth study of the impact of digital inclusive finance on household financial asset allocation will help guide individuals and households to make more rational financial planning and asset allocation. By providing relevant research results and suggestions, it can help families make better use of the digital inclusive finance platform, optimize asset allocation, achieve financial objectives and improve financial stability.

1.2. Research contents and methods

1.2.1. Research content

In this paper, we first explain the relevant concepts and development status of digital inclusive finance, and in-depth analysis of the impact of digital inclusive finance on household investment behavior. Then, by reading the relevant literature, the paper studies the impact of digital inclusive finance on household financial asset allocation and reveals the positive relationship between the development of digital inclusive finance and household financial asset allocation.

Finally, this paper also discusses the policy recommendations for the development of digital inclusive finance.

1.2.2. Research methods

Literature research method: consulting and browsing the relevant literature and works at home and abroad, comprehensively sorting out the relevant theoretical literature on family financial assets and digital inclusive finance, and comprehensively summarizing the influencing factors of family financial assets allocation from the internal environment and external macro factors of the family respectively.

2. The core concepts and theoretical basis

2.1. Definition of core concepts

2.1.1. Digital inclusive finance

Digital inclusive finance refers to the concept and practice of using digital technology to provide more convenient, affordable and inclusive financial services and opportunities for the general public. Digital inclusive finance contains two key elements. First, digital technologies, such as mobile internet, big data and artificial intelligence, have been widely used in all aspects of financial services, improving the efficiency and accessibility of financial services. Secondly, it is inclusive, that is, Digital inclusive finance emphasizes low-cost and low-threshold ways to provide financial services to marginalized groups in the traditional financial system, including but not limited to low-income groups, rural residents and small and micro enterprises. Specifically, digital inclusive finance includes the following services: digital payment. Through mobile payment and other means of transaction payment, the cost and threshold of payment are reduced, and the safety and convenience of payment are improved. Digital credit. Using technologies such as big data and artificial intelligence to assess users' credit risk and provide users with small loans and credit services. Digital insurance. Through digital insurance products and services, more personalized and adaptable insurance services are provided to users. Digital investment. Through digital investment platforms and tools, users are provided with more convenient and flexible investment choices, thus lowering the investment threshold and cost.

2.1.2. Household financial assets

Family financial assets refer to all assets owned by the family that can be converted into cash or other monetary forms and can bring certain property income to the family for a period of time in the future, including but not limited to cash, demand/time deposits, internet wealth management products, stocks, bonds, funds and other asset forms. Among family financial assets, cash and bank deposits are the most basic forms and the source of emergency reserve fund and daily expenses for families. Investment assets such as stocks, bonds and funds can bring higher returns, but at the same time they are accompanied by higher risks. Different types of assets can be selected based on the family's risk preferences and financial goals. The proportion of financial assets owned by the family is one of the important indicators to measure the family's financial situation. It can not only reflect the current family's wealth strength and economic conditions, but also be used to make family financial planning and decision-making to help families achieve financial goals. Family financial assets can provide stable cash flow and reliable guarantee for families. Therefore, an effective family financial asset allocation plan can better help families achieve financial freedom and better cope with challenges in life and work. The allocation of family financial assets involves family financial planning, investment management, risk control and other aspects. An effective family financial asset management plan should comprehensively consider factors such as the family's financial objectives, risk preferences, income and expenditure. At the same time, family members also need good communication and cooperation to ensure that the management and use of assets are in line with the interests of the whole family.

2.2. The theoretical basis

2.2.1. Portfolio theory

Modern portfolio theory proposed by markowitz is one of the foundations of modern portfolio theory, which holds that a balance between risk and return can be achieved through an effective portfolio. When designing a portfolio, markowitz takes into account the individual's risk appetite and quantifies the return and risk of the portfolio by means of mean and variance. When selecting a portfolio, investors should pay attention to diversification and diversify their capital into different asset classes and markets in order to maximize the low risk under the same return or high return under the same risk. Portfolio optimization can be achieved by combining different asset portfolios, i.e. the objective of minimizing portfolio risk at a given level of return. Markowitz and modern portfolio theory have been widely used and become the foundation of modern portfolio management and asset allocation.

Sharp proposed a capital asset pricing model based on modern portfolio theory and market efficiency theory. The model believes that diversified investment can effectively reduce the risk of diversification. Compared with the risk preference of investors, the proportion of risk assets and risk-free assets in the portfolio of investors has a greater impact on the degree of risk tolerance. Therefore, the risk and return should be balanced according to the risk preference of investors in the asset allocation, and the risk control and return maximization of the asset portfolio can be achieved by allocating an appropriate proportion of risk assets and risk-free assets.

Modern portfolio theory will also have a greater impact on the development of Digital inclusive finance. Modern portfolio theory believes that asset allocation decisions should be based on the trade-off between risks and benefits, and achieve maximum benefits and minimum risks by combining different assets. Digital inclusive finance platform can provide various financial products and services with different levels of risks and benefits, which is convenient for users to allocate and combine assets according to their own needs and risk tolerance. Digital inclusive finance can also provide users with personalized risk management solutions through data analysis and risk management technology to reduce the risk of asset allocation. Therefore, modern portfolio theory plays an important role in guiding the development of digital inclusive finance platform's products and services and the improvement of diversity and effectiveness of household financial asset allocation.

2.2.2. Behavioral finance theory

Different from the assumption of "complete rationality" in the traditional financial theory, behavioral finance theory holds that investors only have limited rationality and their investment decisions are influenced by multiple factors such as macro environment and investors' emotions. Therefore, the price decision in financial market depends largely on the behavior of investors. The theory fully considers the emotion and subjective feelings of investors, and opens up a new research thinking for the business development of financial institutions and the theoretical research in the academic circle. At present, behavioral finance has developed into an important branch of financial theory. As the financial asset allocation decision of a family is made by the head of the household and other family members, residents with different personal and family characteristics will show diversified risk preferences and investment emotions when facing the same risk investment decision, which will affect the financial asset allocation decision of the whole family. Therefore, it is necessary for this paper to fully draw lessons from behavioral finance theory to pave the way for subsequent research.

2.2.3. Financial inclusive growth theory

The financial inclusive growth theory, the first principle is the principle of fairness, on the basis of promoting economic growth, also guarantee the inclusive growth of the economy. In the long river of economic development, the efficiency of economic development and its fairness are always hard to be satisfied with each other. The national government often leads the choice between the two. However, the traditional economic system tends to lay more stress on the efficiency of economic development. The focus of the country is on the overall level of economic development and the speed of economic growth. As a result, the differences between urban and rural areas are more obvious. In the long run, the rich are richer, the poor are poorer, and the allocation of social assets is out of balance. The solidification of this class will not only lead to extreme unfairness in social development, but also lay a foundation for social instability in the future. In serious cases, it will also lead to social development experiencing turbulence.

In this case, scholars proposed to reduce the social and financial gap through inclusive economic development. Specifically, it is necessary to reform the financial system to ensure that residents enjoy their basic rights in the financial market and to optimize the rational allocation of financial assets. At the same time, more financial services and opportunities for financial development are provided for the socially vulnerable groups, in order to reduce the social gap between the rich and the poor, balance the economic and financial development of urban and rural areas, the east and the west, and enable every small citizen in the motherland to equally enjoy the benefits brought by the country's economic development and to be proud of the motherland.

3. Status Quo of Holding Digital Financial and Family Risk Financial Assets in China

3.1. The development status of digital inclusive finance

As digital inclusive finance is both digital and inclusive finance, with the continuous development of the Internet, digital inclusive finance will certainly become the main trend of the development of China's financial industry in the future. Although the current digital inclusive finance has a fast development speed and a good development prospect, its development has also experienced a long process.

First, inclusive finance was proposed and developed. Its proposal is mainly for the country to enable all groups, especially people in rural areas, to have equal access to financial services. During this period, the state provided inclusive finance mainly by increasing financial outlets and credit cooperatives and other substantive means, which resulted in representative inclusive finance institutions: village banks, rural postal savings banks, agricultural firms and credit cooperatives. With the emergence and development of Internet technology, people gradually combine the two, thus producing the digital inclusive finance.

Second, by the end of the 20th century, with the rapid development of Internet technology, payment through the Internet has become practical and feasible, thus giving birth to the embryonic development of digital inclusive finance. During this period, financial institutions no longer rely solely on physical means to carry out inclusive finance, but began to use the rapid development technology of the Internet to carry out Internet business. At the same time, financial institutions also stopped working alone and began to look for Internet enterprises to cooperate, thus promoting the emergence of financial innovation, and creating brand-new financial products and services such as mobile banking and third-party payment. With the continuous application of Internet technology in the financial field, financial institutions can provide customers with the financial services they need more conveniently and quickly. At the same time, it also promotes the development of digital inclusive finance.

Third, since the 21st century, the Internet technology has developed rapidly. Large Internet companies have begun to enter the financial field, among which Alipay and other financial companies' P2P products are their products. Online credit business has been promoted, and micro-loans can be applied and processed online. In addition, the insurance, storage, credit and wealth management businesses of traditional financial institutions have also begun to provide online services, which are convenient and fast. With the vigorous development of online financial business, people's financial needs become more diversified and personalized.

3.2. The status of family financial assets held

In recent years, with the continuous strengthening of China's economic strength, the financial sector has also achieved rapid development, the relevant mechanisms and regulations have been continuously improved, and the residents' families' enthusiasm for participating in finance has also become higher and higher, especially in per capita disposable income, where the level of education has been significantly improved, the desire to hold financial assets has become higher and higher, and at the same time, there are more financial products to choose from. Household assets include both financial and non-financial assets. In financial markets, transactions in financial assets are subject to the corresponding requirements to earn revenue by selecting investment products. These products include stocks, funds, savings and other wealth management products. In contrast, non-financial assets mainly refer to fixed assets, such as housing and private cars. This paper studies household financial assets, mainly including savings, funds, stocks and other financial products. Savings are generally considered as risk-free assets with low risk; Financial products such as stocks and funds are generally regarded as risky financial assets due to their own risk characteristics. Families should choose different types of financial assets reasonably based on their own risk preferences and under the premise of controllable risks in order to pursue revenue.

At present, although the allocation structure of family financial assets in our country has been optimized and improved to a certain extent, people still prefer to choose low-income and low-risk bank deposits or high-income and high-risk stocks when choosing financial assets, but choose less for other financial assets, the diversity and effectiveness of the allocation of family financial assets are low, and there is still much room for improvement.

4. Research on Allocation of Household Financial Assets

4.1. The impact of factors

4.1.1. Age factor

Bodie & Crane(1997) pointed out in the research that households are in different age groups and their allocation ratios of risky financial assets are quite different; Research by Agnew(2003) shows that there is a U-shaped structure between participation in risky financial markets and age, and points out that there is a U-shaped structure between participation in risk-free financial assets and family age, which first decreases and then increases. At the same time, Wu Weixing and Chang Xueliang (2013) think that the shareholding ratio is significantly negatively correlated with age. However, Bertaut & Haliassons(1997) empirical research on the age effect of household risk financial asset allocation shows that the proportion of household holding stock investment presents an inverted U-shaped structure with the increase of age, which increases first and then decreases.. That is, with the development of career, relative to the growth of total household assets, households will increase their investment in stocks, reaching the highest proportion before retirement; After retirement, the share of shares gradually decreased.

4.1.2. Education level

On the whole, most scholars believe that the improvement of residents' education years and educational level will positively promote the participation of family financial assets and risky financial markets. Calvet(2009) believes that there is a certain cognitive threshold in the stock market, and the improvement of education level is beneficial to overcome these obstacles. Therefore, under the condition of fixed income level, the higher the education level of the head of household, the greater the probability of participating in the stock market.; Dohmen(2010) believes that with the improvement of education level, not only can the income of families be increased, but also the investment awareness and investment level of families can be improved.

4.1.3. Housing

Although domestic and foreign residents have certain differences in income level and consumption concept, for most families, housing mortgage and loans account for a large proportion in the family wealth allocation. Housing has both net housing value and mortgage debt effects on the portfolio, and it is generally believed that housing tends to reduce the demand for risky assets. Xiaomeng Lu, a domestic scholar, also found through the establishment of Tobit model that the crowding-out effect of multiple housing units on the market participation of risky assets is greater, and the probability of buying a house is greater than the investment of financial assets, which affects the development of financial market to a certain extent.

4.2. Relevant research on the impact of digital inclusive finance on household financial asset allocation

Research on the overall impact effect: Most scholars found that the higher the level of digital inclusive finance, the greater the participation of residents in the financial market, and the greater the diversity of household investment. For example, Lu Xiaomeng, Zhao Shuang and others measure the level of regional financial development with the Digital inclusive finance Index. The study found that there is a positive correlation between the level of regional financial development and the degree of diversification of household asset portfolios, that is, the higher the level of regional financial development, the higher the degree of diversification of household asset portfolios. Liao Jinglin and Zhou Li found that the higher the development level of Digital inclusive finance, the greater the probability that households in the region will obtain fair and high-quality financial services, and the more they can promote the investment in risky financial assets of households.

Research on impact heterogeneity: Generally speaking, in less developed financial markets, residents have fewer channels to invest in financial assets, and their financial literacy is relatively low, and their motivation to participate in financial markets is relatively weak. Digital inclusive finance shows stronger inclusive characteristics in these regions, that is, by improving investment convenience and reducing service costs, residents can directly access more financial products and services, increase the types of asset allocation of residents, enhance the diversity of asset allocation, and alleviate the problem of unfair distribution of financial resources; For regions with higher levels of economic development and better financial market structure, residents already have a certain investment base. Digital inclusive finance is more likely to increase the income level of residents in the region through the introduction of more diversified financial products to promote residents' deep participation in high-income, high-risk financial management activities. This process requires longer market penetration. Therefore, most of the existing researches believe that Digital inclusive finance has a stronger impact on the diversity of household financial assets allocation in rural (or central and western) regions than in urban (or eastern) regions.

5. Research conclusions and recommendations

5.1. Research conclusions

Household is one of the important participants in the financial market. The allocation of financial assets will be affected by both internal and external macro-economic factors. Under the background of the development of China's digital inclusive finance, this paper conducts an in-depth study on the impact of digital inclusive finance on the allocation of household risk financial assets. Based on the theory of family financial assets, this paper analyzes the impact of digital inclusive finance on the allocation of family financial assets, and puts forward corresponding research suggestions. Based on the above research, the following conclusions are drawn:

The results show that the development of digital inclusive finance has a positive significant impact on the allocation of household financial assets, and the benchmark regression results remain significant after the robustness test, indicating that the use of digital finance has an important role in promoting the allocation of household financial assets.

Moreover, research shows that Digital inclusive finance has heterogeneity in promoting household risk financial asset holding. Through the heterogeneity test in the eastern, central and western regions, it is found that the development of digital inclusive finance has a significant positive impact on the types of family risk financial assets held in the eastern, central and western regions and has a greater impact on the eastern region, mainly due to the higher level of economic development in the eastern region; By testing the heterogeneity of urban and rural areas, it is found that the development of digital finance has a significant positive promoting effect on these two areas, and has a greater impact on urban and rural areas.

5.2. Policy recommendations

The development of digital inclusive finance is profoundly changing the traditional financial system of our country, as well as the investment and consumption habits of households. Facing the low income and low efficiency of domestic household financial asset allocation, reasonable and effective policies have a positive impact on improving the financial asset structure of Chinese households, raising the income level of residents and thus improving the living standard of residents. Policy suggestions can be made from the following three aspects:

Strengthen the publicity and education of risk science popularization to improve residents' financial literacy. As China's financial literacy level is not high and most families have low financial literacy, they hold a conservative attitude in investment, choose fixed assets such as savings deposits or real estate investment, and choose a single product to purchase when investing in risky financial assets. Therefore, it is very important to raise residents' attention to financial knowledge and basic financial concepts. The government should regularly hold financial policy publicity and financial knowledge popularization activities in different cities and regions, and can carry out science popularization education activities through the combination of online and offline means, TV media, slogans and other channels; At the same time, professionals can be invited to provide families with financial knowledge training and counseling to guide families on how to allocate financial assets rationally. After changing the traditional conservative investment concept, families can further understand the risks of financial investment, so that different families can effectively carry out diversified risk financial investment at the level that they can bear risks.

The government should vigorously promote the development of digital inclusive finance. With the continuous development of digital inclusive finance, its coverage has been expanding, its use depth has been deepening, and its degree of digitalization has been improving. Digital inclusive finance has broken the plight of low participation rate in China's family financial market, and has provided a true and reliable channel for families to participate in the financial market. The development of Digital inclusive finance needs strong policy guidance and a good financial ecological environment. The government should give full play to its role as a "leader" and actively guide the implementation of policies.

Strengthen the supervision of digital financial activities. Although digital finance has many advantages that traditional finance cannot achieve with the help of internet technology, it also has certain risks. Due to the potential technical problems of the internet itself, it may lead to information leakage, account password theft, irregular transfer of funds and other issues between the parties to the transaction. Moreover, due to the rapid dissemination of information on the internet, when the risks occur, it will spread rapidly throughout the network, which may lead to the occurrence of systematic financial risks. Therefore, the government and relevant institutions must strengthen supervision and management while encouraging residents to use digital finance. One is to formulate laws and regulations to restrict the behavior of both parties in the transaction. The other is to use financial technology to strengthen the safety construction of digital financial platforms.

Acknowledgements

This research project has received funding from the National College Student Innovation and Entrepreneurship Training Program（No.202210378151）.

References

[1] Wang Shaohua, Ma Wenyu, Li Qingyi. Research on the impact of digital inclusive finance on household financial asset allocation in the Yellow River Basin[J].Journal of Yanshan University(Philosophy and Social Science),2024,25(01):68-79.)

[2] Cai Yangping, Liu Weijia. Research on the impact of digital inclusive finance on the financial asset allocation of rural households[J].Northern Finance,2023,(12):33-39.)

[3] Niu Yapeng. Research on the impact of Internet finance on household financial asset allocation[J]. Financier,2023,(12):7-9+27.)

[4] Liu Lanqin. Research on the impact of digital finance on household financial asset allocation[J]. Contemporary Financial Research,2023,6(09):53-62.)

[5] Liu Zheyi, Liu Shiyun. The impact of digital inclusive finance on household weak relative poverty: Based on the research of household asset allocation[J].Journal of Financial Development, 2023,(02):31-44.)

[6] Qin Tian. Research on the impact of digital finance on the allocation of Chinese household risk financial assets[D]. Shanghai University of Finance and Economics, 2023.

[7] Dong Jingxuan. Digital finance, household financial asset allocation and consumption[D]. Shandong Normal University, 2023.