

Research on the Impact of Financial Innovation on Macroeconomic Volatility

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Abstract: Since the reform and opening up, China's economic and technological level has been significantly improved. For a long time, the Chinese economy has been in a stable and upward trend. With the arrival of the "Internet plus" era, the impact of innovation on economy and finance has risen to a new level. After the opening of the financial market, there was immediately what we are now familiar with financial risks and innovation, and financial innovation is aimed at reducing financial risks. According to the theory of economic cycle fluctuations, there are many factors that lead to macroeconomic fluctuations, including the total demand level such as consumption and investment, as well as the total supply level such as technological progress. With the continuous advancement of economic globalization, financial innovation, and financial integration, while financial markets bring economic profits, they inevitably bring systemic financial risks, which in turn affect the operation of the macro economy and seriously lead to financial crises. Only by mastering more economic operation information, having stronger judgment on future economic trends, and communicating more effectively with the market, can the efficiency of macroeconomic regulation be improved. This article studies the impact of financial innovation on macroeconomic fluctuations.

Keywords: Financial innovation, Macroeconomic, Volatility, Impact.

1. Introduction

After the global financial crisis in 2008, the theoretical community had different understandings of the sources of economic and financial crises, including factors such as output, prices, currency, and technology, which could have an impact on the economy and bring about changes in the linkage between the economy and finance [1]. The development and evolution of economic structure and the continuous innovation of financial technology have made the Chinese financial system neither completely independent nor influenced by the changes in China's economic structure and innovation in financial technology [2]. The increasingly perfect financial market has led to the rapid development of the financial industry and the creation of more and more profits. With the continuous innovation of financial instruments, the continuous improvement of economic financialization and financial liberalization, the impact of financial shocks on the real economy is becoming increasingly prominent. Through the spillover and transmission mechanisms of financial risks, as well as the amplification and acceleration mechanisms of financial markets on various impacts, the financial system has significantly changed the operational laws of the macro economy [3].

An important fact that China is currently facing is the increasing and accelerating aging population, which may have a more severe impact on the existing economic development model. From an economic perspective, there are two main issues: firstly, the changes in the national savings rate caused by aging, and the estimation of its impact on investment and output; The second is the adjustment of residents' savings structure and changes in financial structure caused by aging, and their impact on investment and output. At present, the Chinese economy is in a critical period of transforming its economic development model, optimizing its

economic structure, and deepening the reform of the financial system. Preventing and controlling financial risks and maintaining financial stability are the top priorities for adapting to and leading the new normal. Internet style innovation enters various industries in the national economy in the form of almost zero cost information, and has a promoting effect on the macroeconomic and financial markets. In the process of transforming China's economy from high-speed growth to high-quality growth, China is striving to accelerate the transformation of its economic growth mode from mainly relying on factor investment to mainly relying on technological innovation. With Internet plus industry, agriculture, service industry and other industries in the national economy, the impact of Internet based innovation on the macro-economy will continue to strengthen. In the era of "Internet plus", the Internet, as a core innovation element to transform the mode of economic growth and adjust the structure of economic growth, has a profound impact on all aspects of the economy and society [4].

Studying the transmission channels and impact mechanisms of financial shocks on the real economy is not only the core content and breakthrough for deeply understanding the complex correlation mechanism between the virtual economy and the real economy, analyzing the mechanism of economic cycle fluctuations and crisis formation, but also the key to scientifically formulating macroeconomic regulation policies and financial regulatory measures. The reform of the financial industry is inevitable. In the process of reform, the government should implement scientific and precise macroeconomic regulation to create a continuous source of power for the development of the Chinese economy [5].

2. The Impact of Financial Innovation on Macroeconomy

2.1. The Necessity of Developing Financial Innovation

Finance can be roughly divided into three categories: financial products, financial institutions, and financial systems. Corresponding financial innovation can be divided into financial product innovation, financial system innovation, and financial system innovation [6]. In recent years, the development of China's financial industry has gradually stagnated, and innovation capabilities cannot keep up with the speed of economic development, which needs to be improved. Financial product innovation, in the current era of rapid development in both technology and economy, includes diversification and high-tech. Financial institutions are financial intermediaries engaged in financial services and are part of the financial system. The financial system, as the basic framework for capital flow in the economy, is the macro environment formed by finance itself. The initial changes that financial technology brought to people's lives were to improve financial efficiency and optimize financial services through a series of financial technologies such as big data, cloud computing, and innovative blockchain and artificial intelligence [7].

Innovative financial economy can expand the market for financial products, increase market share, and stimulate market development. If an innovative economy is developed, the financial industry can develop more financial products, cater to various types of customers, attract more consumers to enter the market, and generate more income by increasing the supply of different financial products. While expanding the scale of product supply, financial companies can attract a large number of customers to invest in funds. After raising more funds, financial companies can use the income they obtain as capital for production development and re invest it in the market, providing production factors for the new round of production, and continuously expanding the scale of the enterprise [8].

2.2. The Impact of Internet Innovation on the Economy

The development of technological level is an important factor in promoting economic progress, and the trend of economic revolution must be based on the progress of scientific and technological level [9]. Since the rise of internet finance as a new business in 2013, the first stage has mainly focused on financial technology in the ecosystem. Internet style innovation specifically refers to the innovative ability of the Internet to utilize a wide range of connectivity capabilities, "+" various industries, and bring about structural upgrading and efficiency optimization of the three major industries. Industry is an important carrier carrying high-quality economic development, and innovation is the first driving force leading high-quality economic development [10].

Due to the heterogeneity of internet-based innovation, the development speed of different industries varies. As shown in Figure 1, in the short to medium term, the development of the Internet mainly relies on model innovation, driving the development of the tertiary industry through the service industry; In the medium to long term, internet-based innovation has begun to emerge, becoming increasingly closely integrated with industry and agriculture, driving the

informationization and modernization development of the manufacturing industry. Internet-based innovation has widely penetrated various industries through innovation leadership and innovation platform functions. The mutual penetration between traditional industries and the internet industry is becoming increasingly frequent, and online and offline entities flow in both directions. To reform the traditional economic development model, the financial industry must clarify the important role of science and technology in the current process of China's economic development, in order to continuously improve the economic system of the financial industry, fully leverage the role of information technology in the economic reform of the financial industry, and promote the reform and innovation of the Chinese financial industry, providing better financial services for the market.

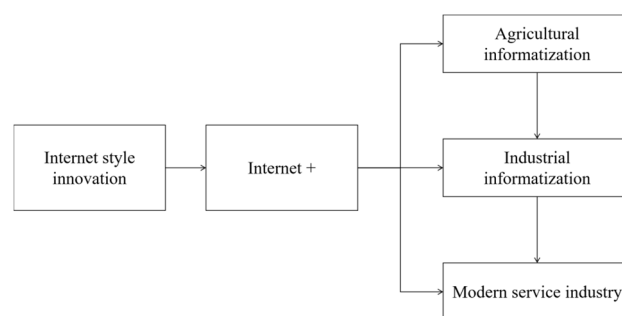


Figure 1. The Impact of Internet innovation on the economy

3. Measures to promote financial innovation

3.1. Internet + Financial Market

Financial market is an important part of macro-economy, and the establishment, development and maturity of Internet enterprises are closely related to capital market. Internet-based innovation connects all aspects of macroeconomics and finance by combining with various traditional industries. As shown in Figure 2, from the perspective of subdivision, the innovation model of traditional fields in internet plus is currently having the most extensive impact on the national economy.

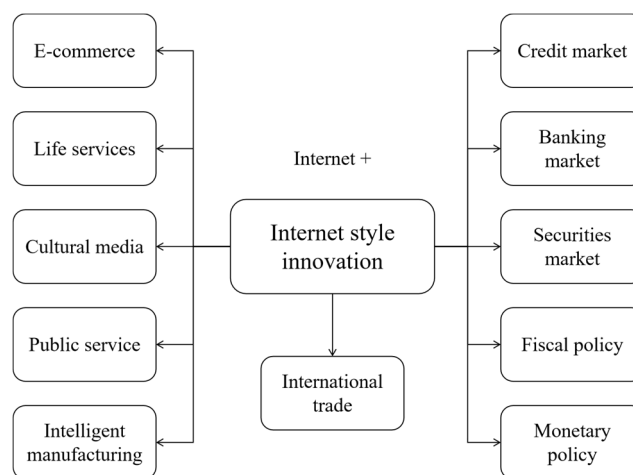


Figure 2. Various areas of internet + macro-economy.

In order to give full play to the platform role of the Internet, we should innovate the management concept. For the

integrated innovation generated by using the Internet platform in traditional fields, we should first adopt an open and inclusive attitude, reduce administrative restrictions such as prior approval and encourage innovation and development on the basis of ensuring effective monitoring of security risks afterwards. The development of Internet and financial deepening complement each other, and the development of internet plus's finance can promote each other through the two industries, thus solving the problem of insufficient financing channels in the development of Internet industry. Corporate financing constraint is one of the important reasons for its lack of innovation, but not controlling corporate financing behavior is likely to lead to excessive virtual investment. In this regard, the government should improve corporate financing efficiency, strengthen supervision over the use of corporate loans or raised funds, and encourage them to invest their funds in R&D and innovation.

3.2. Accelerate the Process of Marketization

Monopoly in the financial industry is serious, and administrative protection and market closure are the main factors that seriously hinder the development, reform and innovation of the financial industry in China. At the macro level of national and financial markets, we should make good use of effective markets, and at the same time, the government should also play its control role and do a good job in risk prevention. Under the background of economic globalization, China has made many new trading partners in the WTO, creating new opportunities for China's economic development. Adhere to the use of prudent monetary policy, improve the financial market system, promote the reform of interest rate marketization, cultivate an industrial regional credit environment, build a healthy loan risk compensation and sharing mechanism, and help excellent enterprises with temporary difficulties to tide over the difficulties according to the principle of marketization and rule of law. Only by adapting to the development of the times, speeding up the process of marketization and striving for reform and innovation can we create a good development environment for China's financial industry.

For financial regulatory agencies, to play a regulatory role, it is necessary to control risks through macro guidance and micro inspection to prevent improper management and careless operation. Because China is dominated by the banking system, only by standardizing banks can the entire financial system be stabilized. When the economic environment at home and abroad is changing faster and faster, the central bank should establish a perfect active monetary policy system as soon as possible to improve its flexibility and effectiveness in adjusting monetary policy. With the development of diversified financial markets, the continuous innovation of financial products will inevitably lead to the rise of systemic financial risks. Especially affected by the COVID-19 epidemic in 2020, the global economy is facing certain losses, and the central bank must assume the responsibility of maintaining currency stability, promoting economic growth and stabilizing financial markets. Therefore, the government should set up corresponding laws and regulations for the financial industry, and control the development of China's financial industry with targeted legal provisions. Promote the reform of the financial system in order, and establish a system to guarantee the reform and learn from the financial crisis.

4. Conclusions

The advantages of financial innovation outweigh the disadvantages, and its benefits are always primary and mainstream. Facing the dilemma of macroeconomic regulation and financial market regulation, it is extremely necessary to actively promote the innovation and transformation of government decision-making mechanisms and regulation methods. There is a high positive correlation between the popularization of the Internet and macroeconomic growth and financial development, especially in the era of mobile internet, where mobile networks are closely related to the economy and finance. The government should take advantage of the complementary development opportunities of internet innovation and financial activation, utilize the catfish effect of internet finance, promote financial system reform, and provide broader financing channels for internet innovative enterprises. Strengthening the prevention and control of financial market risks, especially those in the banking and stock markets, in the new era is particularly crucial for reducing the transmission impact of financial risks on the macro economy and balancing the stable and healthy development of the macro economy and financial system. As long as macroeconomic regulation is improved and regulation is strengthened, the negative effects of contemporary financial innovation should be minimized, and safety and efficiency cannot be achieved simultaneously. The industry and enterprises will work together to promote the transformation and upgrading of the financial economy, develop an innovative economy, and after improving the institutional mechanisms, the obstacles and problems existing in the current reform of China's financial industry will be reasonably resolved, thereby promoting the sustained and healthy development of China's financial industry.

References

- [1] Sun Naiyan. The impact of Internet innovation on macroeconomic and financial fluctuations [J]. *Rural Economy and Technology*, 2018, 29(16):2.
- [2] Bai Junjiao. The impact of innovation in the "internet plus" era on macroeconomics and finance [J]. *Journal of Shanxi University: Philosophy and Social Sciences Edition*, 2020(1):130-138.
- [3] Qian Jin. Influencing factors and countermeasures of financial and economic innovation and development [J]. *Market Weekly Theory Edition*, 2019(44):2.
- [4] Niu Feiyun. "internet plus" era of innovation on the macroeconomic and financial impact of exploration [J]. *Chinese Science and Technology Journal Database (full text) Economic Management*, 2022(1):3.
- [5] Tong Xiangbin, Zhang Shuhua, Zhang Zhipeng. An empirical test of the time-varying impact of financial cycle fluctuations on the macro economy [J]. *statistics and decision*, 2021, 37(24):5.
- [6] Ma Yongyuan, Xue Ligu, Shen Ao. Technological innovation, financial accelerator and macroeconomic fluctuation [J]. *Systems Engineering*, 2022, 40(4):12.
- [7] Liu Ru, Huang Haili, Shi Caiyu, et al. Financial technology, macroeconomics and systemic risk of banks [J]. *Business Research*, 2023, 30(1):95-104.
- [8] Wang Xiqin. Analysis of the factors affecting China's financial and economic development and innovation [J]. *Consumer Guide*, 2018, 000(011):179.

[9] Zhang Qiulin. On the impact of innovation in the "internet plus" era on macroeconomics and finance [J]. Market Weekly Theory Edition, 2020(16):0118-0118.

[10] Miao Wenlong, Zhou Chao. Population aging, financial asset structure and macroeconomic fluctuation effect [J]. Management Review, 2020, 32(1):12.