

Research on the Relationship Between the US Financial System and Macroeconomics

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Abstract: In the post pandemic era, the US financial system and macroeconomy have undergone significant changes. In terms of the financial system, the Federal Reserve implemented quantitative easing policy, which led to a surge in money supply and flooding of liquidity, which to some extent inflated the stock market foam. At the same time, the volatility of the US financial market has increased and risk events have occurred frequently, such as the risk events of banks like Silicon Valley Bank and Credit Suisse, which have raised concerns about financial stability in the market. In terms of macroeconomics, the US government has launched large-scale fiscal stimulus measures to support economic recovery. These measures include providing direct economic assistance to households and businesses, expanding unemployment benefits, and offering low interest loans. These policies effectively boosted the economy in the short term, but also led to a sharp increase in government debt and inflationary pressures. Starting from the three major sectors of the US dollar, US bonds, and the Federal Reserve, and analyzing the relationship between the two through causal analysis and literature research, it is concluded that the US financial system has both advantages and disadvantages for macroeconomic development

Keywords: US dollar, US bonds, Federal Reserve, US financial system, macroeconomy.

1. Introduction

The US financial system ranks among the largest global financial markets, characterized by a diversity of financial institutions and a sophisticated market structure. The US financial market has evolved from a regional to a national scale, ultimately developing into a global financial hub. The US financial system is celebrated for its diverse array of financial institutions and intricate market systems, encompassing commercial banks, investment banks, insurance companies, and securities firms. Moreover, the US stands as the largest capital market globally, drawing in numerous domestic and international corporations and institutions for investment. The stability and growth of the US financial system wield significant influence over the world economy. Serving as an international reserve currency and a principal medium of exchange, fluctuations in the US dollar, coupled with shifts in US monetary policy and financial markets, can trigger global capital movements and exchange rate volatility, thereby impacting the economic stability and growth of other nations. The financial dominance of the US, particularly through the establishment of the dollar system, enables it to exercise control over global capital, thus playing a pivotal role in the global economy. The development of the US financial system is increasingly contributing to domestic economic growth,

with the Federal Reserve's monetary policy shifting towards a direction favorable for the financial sector's development. Financialization has exacerbated the disparities in wealth and income inequality among residents, gravely threatening the US democratic system rooted in the middle class. Financialization has also enabled the US to move away from the traditional approach of resolving the crisis of declining profit margins through territorial expansion, altering the contours of the global economic competitive landscape.

Therefore, the assessment of the US financial system has emerged as a focal point in contemporary academic research. Numerous studies on the US financial system have been conducted by scholars. Economist Jiang Fei opines that the US economy stands at a tipping point between stagflation and recession. Once recession sets in, the downturn in the real economy will adversely affect the financial system, leading to rises in loan default rates and a surge in corporate bankruptcies. Even before the economic downturn, the US financial system was under significant strain, and the banking industry is anticipated to encounter subsequent shocks. It is prudent not to underestimate the economic and financial risks in the US until the Federal Reserve reduces interest rates. Lin Xiaofang argues that the so-called US dollar hegemony is essentially a set of institutional arrangements crafted by the US government [1]. These arrangements, facilitated by the US dollar's role as the primary reserve currency in the global financial and trade systems, promote US global leadership and dominance, despite lacking any tangible backing or regulatory constraints [2].

The first section of this article introduces the US financial system from three aspects: the US dollar, US bonds, and the Federal Reserve. The second section analyzes the relationship between US economic development and the financial system using charts. The third section examines the causal relationship between the US financial system and economic growth. The fourth section evaluates the financial structure of the United States. Lastly, this article concludes with its perspectives and recommended actions.

2. Basic fact analysis

2.1. Introduction to the US Financial System

2.1.1. USD

The US dollar, as the world's primary reserve and trading currency, plays a central role in the US financial system. It is not only a symbol of the US economy, but also the cornerstone of the global financial system. The hegemonic position of the US dollar has brought enormous benefits to the United States, including economic hegemony, capital inflows, and influence in international financial rule making. The United States, through its dominant position in the US dollar, can manipulate international financial rules, formulate policies that benefit itself, and further strengthen its economic strength. The dominance of the US dollar is also reflected in its widespread use in international trade and financial markets. Most of the world's international trade is settled in US dollars, and many countries have a large proportion of their foreign exchange reserves in US dollars. According to the official foreign exchange reserve currency composition data released by the International Monetary Fund (IMF), as of September 2020, the US dollar accounted for 60.5% of the published foreign exchange reserves, still the highest proportion in the world. This enables the United States to indirectly control global commodity prices with its own currency and enjoy significant discourse and bargaining power in international trade. At the same time, relying on the US dollar, the United States occupies an important position in the global payment and settlement system [3-5]. The Society for Worldwide Interbank Financial Telecommunication (SWIFT) is the most important communication channel and indispensable financial infrastructure for global cross-border financial information transmission. It not only connects 215 countries and over 10000 financial institutions worldwide, but

also connects more than 200 local financial infrastructure around the world. Major currency clearing systems such as the euro, pound sterling, Australian dollar, Hong Kong dollar, and Singapore dollar are built on the SWIFT network. The US dollar, as the world's primary currency for trade settlement and financial transactions (accounting for over 42% of the market share) and an international reserve currency (accounting for over 60% of the market share), holds the most important position in SWIFT's payment settlement and has the most significant influence on SWIFT.

2.1.2. US Treasury Bonds

US debt is a kind of bond issued by the US government to raise government expenditure and debt, also known as US treasury bond bonds. Relying on the fact that the US government is one of the largest bonds issuing countries in the world, and its credibility and debt repayment ability have gained widespread international recognition, US bonds have become one of the most important risk-free assets in the world. In 2023, the core factor affecting the pricing of global asset classes is the unexpected increase in US bond yields under the Federal Reserve's interest rate hike. From the perspective of marginal changes, the biggest variable in 2024 is the transition of the Federal Reserve from a rate hike cycle to a rate cut cycle. Due to the relatively stable market assessment of its credit risk, the yield of US bonds is not high. According to statistics, in the three interest rate cut cycles since 2000, the average yield of US bonds has been around 5%, and the returns have been positive. Both in terms of returns and win rates, it ranks first among major asset classes worldwide. However, the U.S. debt crisis caused by the unique democratic system and budget decision-making mechanism of the United States has increased the risk of default of U.S. debt in the past two years. The US Treasury market is the world's largest bond market, with a market size exceeding \$20 trillion. It consists of bonds issued by the federal government and bonds of other government agencies [6-8]. The participants in the US Treasury market include institutional investors such as banks, investment funds, insurance companies, pension funds, and central banks, as well as individual investors. However, the majority of US Treasury bonds are held by institutional investors and central banks. The interest rate level in the US Treasury market can also reflect the market's expectations for future economic trends and inflation. The US Treasury market can also affect international financial markets and international trade. Due to the fact that the US dollar is the world's most important reserve currency and US bonds are denominated in US dollars, changes in the US bond market can affect the exchange rate level of the US dollar and international capital flows. When US bond interest rates rise, the attractiveness of the US dollar also increases because we can obtain higher yields in the US bond market, which in turn leads to an appreciation of the US dollar exchange rate and an increase in international capital inflows into the US market, potentially causing currency depreciation in other countries and affecting their international trade.

2.1.3. Bank of America (Federal Reserve)

The Federal Reserve, which plays a central role in the US financial system, is composed of the Federal Reserve of the federal government and 12 non-profit private joint-stock regional federal banks. Therefore, the Federal Reserve is jointly composed of the government and private sectors, and through a special structural system, constrains the influence of the government and private sectors on policies. The main methods by which the Federal Reserve influences interest rates (federal funds rate) are the FOMC's open market operations, the Federal Reserve System, and the discount loan window. Open market operations refer to buying and selling bonds (mainly short-term government bonds) to inject US dollars and adjust interest rates based on FOMC interest rate results. Among the main ways in which the Federal Reserve affects interest rates, the Federal Reserve System is also extremely important. Every financial institution conducting deposit taking business in the United States is

required to reserve a certain ratio of cash at the Federal Reserve, and the reserve account balance cannot be lower than a certain ratio of short-term deposits absorbed by the financial institution (deposit reserve ratio, using a progressive system: 0% -3% -13%). In addition, excess reserves can be withdrawn at any time. After the outbreak of the 2008 US subprime mortgage crisis, the FOMC lowered the federal funds rate target from 5.25% in mid-September 2007 to near zero by the end of December 2008 and conducted large-scale asset purchases. Before 2008, the size of the Federal Reserve's balance sheet remained at around \$900 billion, growing less than twice in a decade. With the rescue of the subprime mortgage crisis and the launch of quantitative easing, the size of the Federal Reserve's balance sheet rapidly expanded, reaching 4.5 trillion yuan at the end of QE3 in 2014, four times that of before the subprime mortgage crisis. With the Federal Reserve's push for "balance sheet normalization," the asset size has decreased to \$3.8 trillion. In March 2020, with the outbreak of the COVID-19, the Federal Reserve restarted the "unlimited QE". By the end of 2021, the balance sheet size had exceeded 8.6 trillion dollars, more than twice the size before the epidemic. It can be said that the subprime mortgage crisis in the United States is a watershed in the policy thinking of the Federal Reserve in recent years.

2.2. Facts about the Development of the US Economy

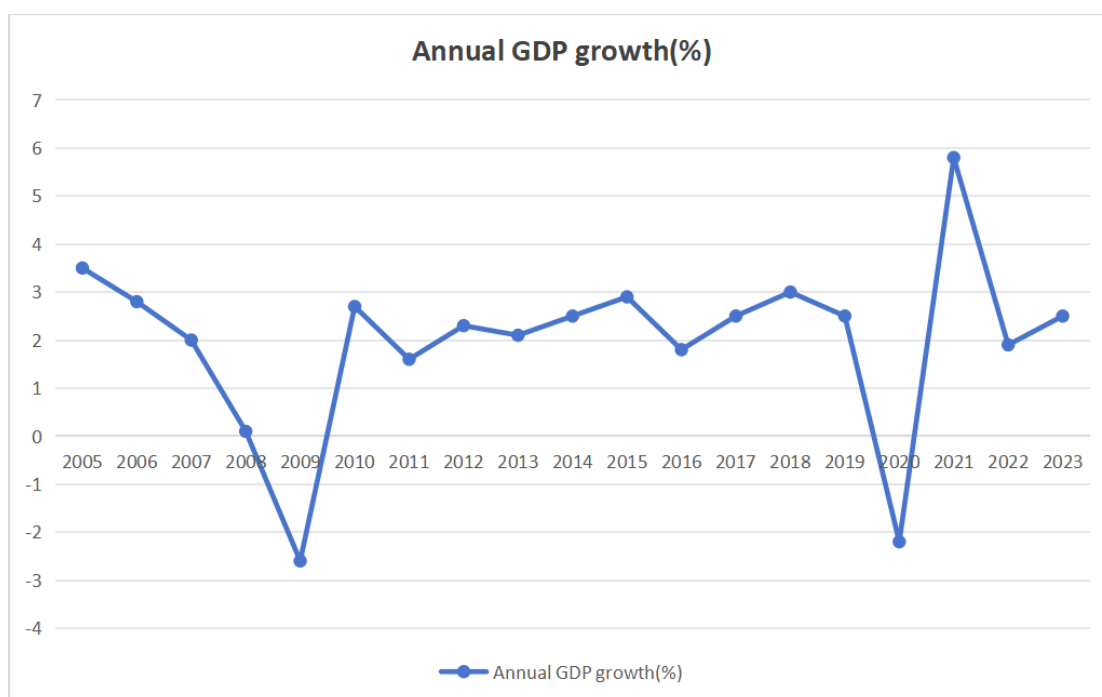


Figure 1: US GDP Growth Rate from 2005 to 2022

As illustrated in Figure 1, the GDP growth rate of the United States experienced fluctuations from 2005 to 2022, exhibiting a trend of volatility, reaching its nadir in 2009 and its peak in 2021. There is no doubt that the 2008 financial crisis dealt a significant blow to most countries, including the United States. However, how did the United States swiftly mitigate the effects of the financial crisis and restore GDP growth from negative territory to normal levels? I attribute this to several factors:

Firstly, the reform of the financial regulatory system. Key elements of the reform include strengthening the supervision and inspection of banks, financial institutions, and insurance companies through the Dodd-Frank Act, and enhancing oversight of financial derivatives.

Additionally, the establishment of the Consumer Financial Protection Bureau safeguards financial consumers from market abuses. Secondly, the United States undertook a series of measures to

safeguard the international status of the dollar, such as the Federal Reserve's reduction of the federal funds rate to near-zero levels, which lowered borrowing costs and incentivized investment and consumption, thereby enhancing the attractiveness of dollar assets relative to other currencies.

Finally, the financial administrative system was refined. The establishment of the Financial Stability Oversight Committee facilitated the identification and mitigation of systemic risks, thereby promoting financial stability. Concurrently, the Consumer Financial Protection Bureau was created to shield consumers from unfair, fraudulent, or abusive financial services and products.

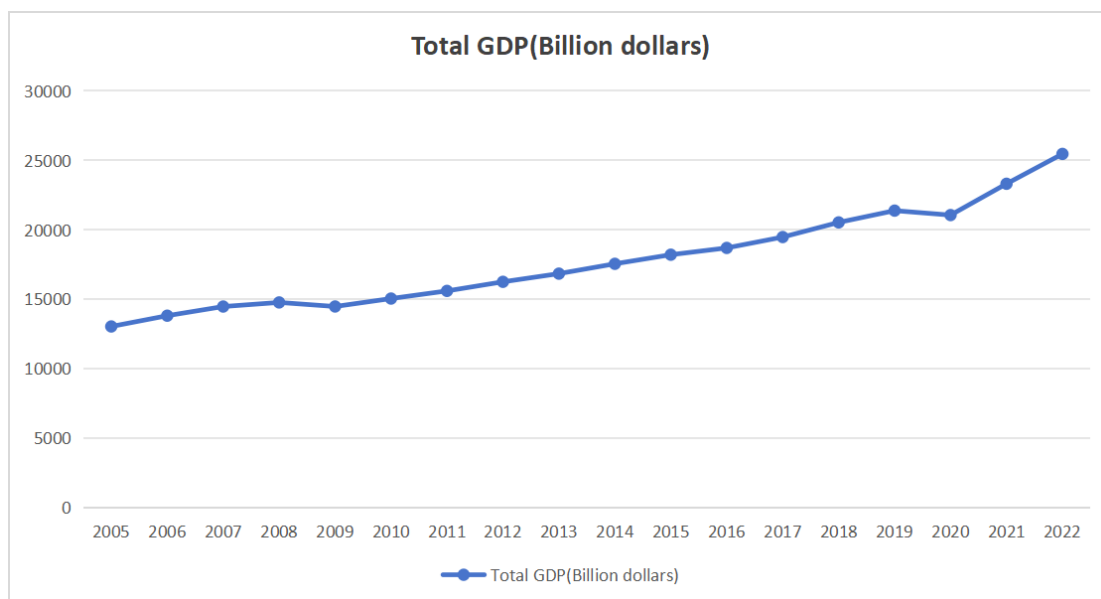


Figure 2: 2005-2022 GDP trend of USA

As shown in Figure 2, the United States experienced a severe impact of the COVID-19 pandemic from 2020 to 2021, but its GDP increased rapidly. This phenomenon can be analyzed from the perspective of the US financial system.

Firstly, the US government has implemented large-scale fiscal stimulus measures, including providing subsidies directly to residents and businesses, as well as transferring income to residents' pockets through debt expansion, supporting consumption growth. These measures directly increased economic activity and promoted GDP growth.

Secondly, the Federal Reserve adopted a quantitative easing policy, maintaining a monthly expansion scale of \$120 billion in bond purchases, and expanding its total assets and liabilities to \$8.9 trillion by the end of 2021, providing financial support for economic recovery and creating a deficit monetization. The Federal Reserve's super quantitative easing measures have injected a large amount of liquidity into the financial system. Although these measures ultimately led to high inflation in the context of global output constraints and supply chain disruptions, they have indeed supported economic growth in the short term.

In addition, the two-way openness of the US financial market is relatively high, and the scale of international investment assets and liabilities is growing rapidly, indicating that the vitality of the US financial market and its attractiveness to global capital remain strong during the pandemic, providing external support for GDP growth.

3. Analysis of the Relationship between the US Financial System and Economic Growth

3.1. USD

The relationship between the US dollar and macroeconomic growth in the United States is intricate. As the primary global reserve currency, the US dollar's strength directly impacts the country's import and export competitiveness, capital flows, and international investors' demand for US assets. As an international currency, the US dollar holds a unique position in international trade, with significant usage in commodity trading, capital flows, and direct investment globally. [1]The dominant position of the US dollar aids the United States in sustaining its economic growth. The increasing dominance of the US dollar not only attracts international capital to the US market but also mitigates the financial market pressures from domestic monetary tightening, particularly the wealth effect stemming from the decline in financial asset prices. Additionally, the US dollar's strength helps alleviate the external debt burden of the United States. Economist Hu Yuexiao has identified insufficient capital and sluggish investment growth as the primary causes of the US economic weakness. The "helicopter money" model, which circumvents banks and markets to directly distribute cash to the public, has maintained robust consumer spending in the US even amid the COVID-19 pandemic. Zhang Bin and Wu Yunyan applied time series analysis, revealing a symbiotic relationship between the US current account deficit and net foreign debt. The US disseminates a substantial amount of dollars globally by financing trade deficits, while these dollars, when invested abroad, create a feedback loop through the purchase of dollar-denominated financial assets, thereby financing the current account deficit and ensuring enduring domestic prosperity[2-3].

In the absence of internal driving forces, the United States opts to leverage its military and economic dominance to stir geopolitical unrest, instigate trade frictions, interfere in the domestic affairs of others, and even wage wars in certain regions. All these actions purportedly serve to safeguard and solidify the hegemonic status of the US dollar. Concerning the hegemony of the US dollar, Zhang Yan and Liu Yaxin have explained that the deepening economic globalization has enabled the US dollar to fulfill the functions of a global currency in areas such as payments, circulation, and value storage. The world economy has established an interdependent system led by the US dollar, which is termed as US dollar hegemony. However, the dominance of the US dollar brings not only advantages but also disadvantages to the United States. While this hegemony enables the US to borrow funds more cheaply, it also exacerbates fiscal deficits and debt accumulation. Currently, the US government's debt level has reached an all-time high, with the national debt surpassing the 35 trillion marks as of July 29, 2024, which undoubtedly elevates the difficulty and cost of future fiscal adjustments. As various countries strengthen their economic presence, particularly with the rise of developing nations like China, and the stature of currencies such as the euro, renminbi, yen, and Korean won rises, the trend towards de-dollarization is unmistakably evident. In this context, China is undertaking deeper financial cooperation with a broad spectrum of Latin American nations. By the close of 2021, the People's Bank of China had entered into currency swap agreements with 40 countries, amounting to over 4.02 trillion yuan, and has authorized 27 offshore RMB clearing banks across 25 countries and regions [4].

3.2. US Treasury Bonds

The issuance and holding of US Treasury bonds are a double-edged sword for economic growth. The pros and cons of US debt expansion can be viewed from two perspectives: domestic and international. From a domestic perspective in the United States, the expansion of the size of US Treasury bonds can maintain the operation of the US government and the entire US economic system, and the government can also use US Treasury bonds to invest in public projects to promote economic growth. But if the

scale of US bond issuance exceeds the control range of the United States, it will bring enormous pressure to the entire US market, especially the US financial market, and at the same time, the credit of the US government will significantly decline, thereby affecting its ability to repay debts. This may lead to a decrease in market confidence, trigger interest rate hikes, increase government borrowing costs, and exacerbate fiscal deficits. If the situation does not continue to improve, it may even weaken the economic growth potential of the United States, reduce social welfare and public services. No one knows where the tipping point is, "Song Guoyou said." The United States is playing a very dangerous game. If it cannot balance real needs with long-term risks, then the United States will face huge risks [5-6]. From a global perspective, the massive issuance of US Treasury bonds has ensured the operation of the vast world economy and promoted the development of all economies in the world. But the essence of US Treasury bonds is to use the dominant position of the US dollar in the international monetary system to make the world share the debt risk.

If the US government fails to effectively manage its debt, the safety attribute of US bonds as a global safe haven for funds will be seriously questioned. International investors may lose confidence in US bonds, leading to capital outflows, affecting the stability of the US dollar, and even triggering a global credit crunch, damaging the prospects for world economic recovery. Due to the upward pressure on global interest rates and the US dollar caused by the US fiscal policy, the continuous increase in US debt levels will lead to an increase in global borrowing costs. With the global market increasingly focusing on the US debt risk, market confidence is more fragile. Compared with institutional investors, many central banks have also begun to take risk aversion measures. However, the political turmoil between the two parties in the United States has also weakened its ability to mitigate debt risks, let alone the fact that US economic growth and its participation in global competition heavily rely on larger government spending, making its risks even more realistic. The United States should take responsibility for the global economy and mitigate the negative impact caused by the continued expansion of US debt. This year, the issue of US government debt has become one of the focal points in the international financial market. The massive scale of debt has intensified concerns about the sustainability of the US fiscal system and the risk of government debt default.

Although US bonds have long been regarded as the "anchor of global asset pricing", in late October 2023, the price of long-term US bonds will decline significantly, and the US bond market will be in a "bear" state: compared with the peak in March 2020, the price of 10-year US bonds will fall by 46%, which is close to the 49% drop in the US stock market after the Internet foam burst in 2000; The 30-year US Treasury bond plummeted by 53%, approaching the 57% drop in US stocks during the global financial crisis. [7] More importantly, how the Federal Reserve balances anti-inflation and stabilizing the economy, the official cannot predict the future, and the outlook for monetary policy is still shrouded in fog, only able to move forward by feeling the data. In Powell's view, the Federal Reserve is now facing a dilemma. Premature interest rate cuts may reignite the economy and lead to inflation above target levels, while keeping interest rates too high may lead to an excessive cooling of the labor market. "The main risk we have faced in the long run is the inability to achieve inflation targets, and now these two risks are approaching balance. We are very aware of the dual risks we are currently facing.[7]

4. Evaluation and Analysis of the Financial Structure in the United States

The US financial system's strengths are its openness, market orientation, and innovation, which enhance resource allocation and accelerate economic growth. Financial innovation, particularly in financial technology, offers more choices and opportunities for financial institutions and investors, yet it also introduces new risks and challenges. The US financial system appears resilient; however, the true risk lies in the post-subprime crisis decade, during which the US experienced an environment

of near-zero interest rates, often below the inflation rate, leading to a dependence on low-cost funds, which in turn disrupted the Trump administration's exit strategies.[8]

However, there are also some risks and challenges in the financial structure of the United States. For example, the volatility of financial markets, the leverage operations of financial institutions, and the complexity of financial regulation are all potential risk points. The 2008 subprime mortgage crisis exposed the fragility of the financial system, and subsequently, the United States implemented a series of financial reform measures, such as the Dodd Frank Wall Street Reform and Consumer Protection Act, to strengthen financial regulation and risk management. The increase in interest costs brought about by a high-interest rate environment will put a certain degree of pressure on the debt paying ability of the debtor. The Federal Reserve emphasized in its investigation report that the regulatory indicators of large banks are still controllable, but traditional regulatory indicators may have become ineffective [9]. On the one hand, the US fiscal deficit remains high, debt is growing wildly, eroding US sovereign credit and posing a challenge to economic growth; On the other hand, the rampant inflation of US Treasury bonds is like a 'grey rhino', which could potentially impact global economic and financial stability at any time. The United States abuses the international currency status of the US dollar and excessively relies on printing money to stimulate its own economy. By the end of 2022, the total debt of the US government was US \$31.42 trillion, 1.2 times the US GDP of US \$25.5 trillion in 2022, and almost every American had a debt of US \$10000 [10].

Overall, the robustness and flexibility of the US financial structure are key factors for its economic success, but regulatory frameworks and market practices need to be constantly updated to adapt to new financial environments and technological changes

5. Conclusion

In summary, this article summarizes the following viewpoints based on the analysis of the relationship between the US financial system and macroeconomics:

Firstly, the dominant position of the US dollar can attract international capital and alleviate the pressure on the domestic financial market in the United States. However, due to the United States' excessive reliance on the privilege of the US dollar in the international economic system, coupled with the government's policy of monetary easing, the inherent growth momentum of the US economy is insufficient. To some extent, it depends on the external environment and funding.

Secondly, issuing a large amount of US Treasury bonds can promote domestic economic growth and ensure the operation of the domestic and international economic systems. But if the number of US Treasury bonds issued exceeds the controllable range of the US government, it is like playing with fire and setting oneself on fire. At that time, all countries in the world will have to bear corresponding debt risks.

Thirdly, the financial system in the United States has strong innovation capabilities, a sophisticated regulatory system, and the support of the world's largest economy, making its development prospects very promising. However, there are also some issues: the competition among major financial centers is intensifying, the development of financial markets is unstable, and the risk of financial crises is increasing. The regulatory cost is high, and traditional regulatory indicators are gradually being phased out.

Regarding the viewpoints raised in the first paragraph, I have the following suggestions:

Firstly, improve the regulatory mechanism. Improve risk prediction capabilities, regulatory activities should cover all financial entities, and all financial activities should focus on addressing past regulatory gaps and blind spots, and establish relevant institutions for unified management.

Secondly, the Federal Reserve should conduct stricter stress tests and increase transparency so that regulatory agencies and market participants can better understand potential risks and take timely measures to enhance the stability of financial markets.

Thirdly, the US government should reduce its reliance on new debt issuance and avoid the risk of debt crisis through fiscal discipline and economic growth strategies. Reduce reliance on the financial services industry through industrial policies and educational reforms.

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