

A Comparative Analysis of the Formation Path and Impact of Debt Risk in the US and Europe

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Through the comparison of the sovereign debt risks of the two economies, this paper focuses on the analyses of the risk formation path and the fiscal sustainability at the macroeconomic level. Due to the differences in the external resources and coping measures that affect the risk formation of the two economies, as well as the differences in the institutional roots that lead to the rise of debt risks, the impact mechanism of sovereign debt risks is also different. Finally, theoretical and policy implications are given.

Keywords: sovereign debt, analysis, financial crisis

Introduction

Since the outbreak of the financial crisis in 2008, global economic growth has declined sharply. As a result, the fiscal deficit ratio of all countries has risen rapidly in the short term. Excessive debt growth and increasing debt risks are important risks faced by all countries in the process of economic development, and have become an important factor hindering the sustainable economic development of debtor countries.

Comparative Analysis of Sovereign Debt Risks in the US and Europe

The sovereign debt risk of the US and European countries mainly refers to the scale of government debt and net debt. The national sovereign debt risk reflects the decline of the endogenous solvency of the national debt economies, which leads to the increase of the government's demand for debt. According to the October 2020 data from the World Economic Outlook released by the International Monetary Fund (IMF) show that the ratio of general government debt to GDP in the US and European countries has been steadily increasing since 2008, the overall debt ratio of the US and Europe increased from 77% to 124% since 2008 to 2020, much higher than that of developing countries. As the world's largest economy, the overall government debt ratio of the US reached 131% in 2020, while that of the EU also reached 95% and far higher than the 60% debt alert level set by the EU itself (Zhao, Chen, Wei, & Liu, 2021). The United States and European countries with large debt in terms of absolute amount and relative amount (total debt to GDP) include: the United States, Germany, France, Italy, Spain, Austria, Belgium, Portugal, Ireland, Greece, Iceland, the Netherlands, and other countries (Ma & Zhang, 2020).

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FORMATION PATH AND IMPACT OF DEBT RISK

The level of global government debt will continue to rise sharply in 2022. The debt of the US and European countries, which account for more than 90% of the global government debt, is the driving force of the debt increase, but the growth rate has slowed down compared with before. The debt risk of the US and European countries has become the main source of the sovereign credit risk of the global countries. Taking the US as an example, data released by the US Treasury Department show that the US national debt exceeded US \$13 trillion in 2010 after the subprime mortgage crisis. It exceeded the GNP of the US for the first time to reach US \$16 trillion in 2012. The scale climbed to US \$31.1 trillion in 2021 and the ratio of national debt to GDP soared 131% (Bian & Liu, 2020). At present, the per capita debt of the United States exceeds 100,000 US dollars, and the US government needs to pay more than 800 billion US dollars in interest costs on its debt every year (Zhong & Fan, 2021). In addition, 47 of the 50 states and many city governments are facing varying degrees of financial crisis, with debt-laden New York, Illinois, New Jersey, and California in particular. More than 200 municipal bond issuers have defaulted since July 2009. A forecast study by *the Economist* suggests that if America's fiscal deficit does not rise in the future, the size of the national debt above 150% of GDP could lead to hyperinflation.

The risk of US national debt is increasing day by day. Data released by the US Treasury Department also show that a considerable part of US debt is held in overseas markets. The total amount of US national debt held by foreign creditors reaches about 4 trillion US dollars, among which the debt held by China, Japan, and other countries is up to 50% (Zhang, 2012). From an economic point of view, when the government debt level reaches 100% of GDP, more than half of the revenue collected from taxes and other economic sources will be used to pay the interest on the debt; In the face of rising debt, and the risk of accumulated hyperinflation, it will deeply corrode the future of the US economy (Ding, 2010). According to the research of rating agencies, if the US fails to effectively solve the high deficit problem, there is a risk that the US national debt, which is borrowing from today to pay beyond its means, will get out of control. A downgrade of the US government debt may lead to a bigger global crisis, which will undoubtedly plant a time bomb for the world economy.

And Europe's debt problems are widespread, with 20 of the EU's 27 member states running fiscal deficits above the safe three percent of GDP threshold (Yan & Wang, 2010). After the sovereign debt crisis occurred in the euro zone in 2010, Greece and Ireland respectively entered the ranks of official aid, and exposed Portugal, Spain, and other high debtor countries in the euro zone to greater financing risks (Weng & Wu, 2011). Although the temporary rescue mechanism established by the European Union temporarily alleviated the crisis, the deteriorating macro fundamentals did not improve significantly. With the arrival of the financing peak of the European Central Bank) accounted for more than 40% of the total debt of the Eurozone banking system. This structural weakness makes the liquidity risk of euro area banks greater than that of the United States. Among them, Ireland, Spain, Greece, and other countries have increasingly relied on the liquidity support measures of the European Central Bank. The prominence of liquidity risk in the banking sector means that government guarantees on bank debt are still needed. For the above reasons, the government cannot withdraw from the financial rescue measures. The financial rescue will still affect the government deficit and debt scale, and the sovereign credit risk of the Eurozone countries in the further will remain very fragile.

Due to the lack of fundamental measures to restore economic growth in 2023, the debt risk of the US and European countries is very uncertain, and the overall debt solvency of the US and European countries is extremely

fragile. The United States is the largest sovereign debt country, and the decline trend of national debt paying willingness caused by the collapse of its actual debt paying ability will not change. It will continue its quantitative easing monetary policy, which will cause global inflation and liquidity risks to have a significant impact on countries with high external dependence and economic fragility. Some countries in the US and European economies with the weakest solvency may experience rising sovereign debt risk and declining solvency, such as Portugal and Spain. The deficit of the US and European countries is bound to drag down the sustainable development of the world economy.

Based on the above reasons, the overall debt level of the US and European countries will continue to rise in the future, making it difficult to stabilize the debt paying ability of the US and European debtors. The biggest vulnerability of the credit risk of the US and European countries lies in the risk of rising interest rate and financing risk, and the rising interest rate is the prelude to financing rupture. The pressure of rising interest rates in major US and European debtor countries is accumulating. If the trend of hyperinflation occurs in these countries, the economic recovery situation reverses or there is a large-scale bond sell-off, the government's debt repayment pressure will rise rapidly.

Analysis on the Path of Debt Risk Formation in the US and Europe

Rising sovereign debt risks in the US and Europe have not only brought substantial instability to the international financial market and the global economy, but also posed new risks to financial stability and global economic recovery (Hong, 2012). The sovereign debt risks in both the US and Europe are the imbalances in the balance sheets of the economies, reflecting the mismatch between the revenues and expenditures of the relevant governments and excessive indebtedness (Jiang & Mu, 2012). The common characteristics of debt risks in the United States and Europe are as follows. First, the relevant governments do not implement prudent fiscal budget system, and public expenditure does not adhere to the principle of living within its means, which excessively overdraws the credit of future government income (Chen, 2012). Second, the outbreak of the global financial crisis in 2008 is the current international environment of increased debt risk. In order to deal with the economic recession after the crisis, it is an inevitable choice to expand government expenditure. However, whether in the crisis period or the post-financial crisis era, the economic growth is limited or even negative, which will directly lead to the imbalance of income and expenditure. Third, the government is less vigilant about the increase of fiscal deficit and public debt level, or adopt benign neglect, and lack of clear, reasonable and effective fiscal consolidation plan, which makes the debt risk problem continue to deepen.

However, the debt risk problems in the United States and Europe are not completely similar in terms of manifestations, causes, and evolution paths, and there are obvious differences. First of all, the manifestations of debt risk in the US and Europe are different. Debt risk in the US presents a trust or credit risk, which is mainly rooted in the reversal of market expectations brought about by political decision-making mechanisms (Li, 2012). Strictly speaking, the US debt risk is a political game in a certain sense. The carrier of the game is the US debt, and the potential carrier is the US sovereign credit. The root cause of European debt risk is the debt payment difficulty caused by the imbalance of income and expenditure of its member countries. The form of European debt risk is typical debt risk, which is a kind of risk at the economic level (Chen, 2012). Understanding the differences between the two is of great significance for laying a solid foundation for policy responses.

FORMATION PATH AND IMPACT OF DEBT RISK

Secondly, the causes of debt risk in the US and Europe are different. The cause of debt risk is accidental in the United States. There is no obvious market expectation for the US sovereign debt default in the world, and the concern about the sovereign debt risk is mainly due to the huge disagreement between the US government and the Congress, which leads to the "unpredictability of the fiscal consolidation policy". Finally, the unexpected downgrade of the US sovereign credit rating, leads to the concern about the US sovereign debt risk. The European debt risk is the result of the deepening of its debt problem, which is the continuous fermentation of the universality of European debt problem. The dual structural contradiction between fiscal policy and monetary policy is the institutional basis of the European debt crisis. The monetary policy of the euro area member states is formulated uniformly, and the member states can only use fiscal policy to rescue the economy and promote growth and employment. Therefore, the European debt problem is more common, serious, and inevitable (Z. A. Zhou, Fan, & M. Zhou, 2012).

Finally, the formation path of debt risk in Europe and the United States is different. The debt risk of the United States is mainly a kind of impulse and contingent crisis. At present, the United States still does not face obvious solvency difficulties, and there will not be a solvency crisis in the short and medium term. The European debt risk can be divided into three stages from point to surface, from small to large: the first stage is the asset-liability phenotype crisis of Iceland and Central and Eastern European countries, which is mainly due to the financial crisis leading to the shrinkage of their banking sector assets and the deterioration of their asset-liability balance sheet; The second stage is the outbreak of the Greek debt crisis. The European debt problem has become more and more common, and the PIIGS debt problem has emerged, which is a liquidity crisis or temporary repayment crisis. The European debt problem spreads to large and medium-sized member countries at the present stage, and the debt problems of Spain and Italy cause greater concern in the market, which is an internal contagion process of the debt crisis, and it is also a further deterioration of the solvency problem, which may evolve into a continuous solvency crisis (Zheng, 2011a).

At present, the epidemic crisis in the US and European countries has quieted down, and the economy has gradually recovered, but the growth rate is very low, while the debt growth rate remains high. There has been a serious gap between economic growth and debt growth for many consecutive years, which has deepened the government's dependence on financing revenue to maintain fiscal operation and further reduced its solvency (Chen & Ni, 2012). In order to stimulate their own economic recovery, many US and European countries also have high debts and slow down the pace of fiscal adjustment. Therefore, they are in urgent need of enhancing their fiscal credibility. With governments living beyond their means and citizens protesting austerity, the traditional macroeconomic view of government financing has been called into question, both theoretically and practically. Is national debt simply a tax deferred? The history of the debt crises in Greece and Ireland shows that the principal and interest on government bonds issued to finance fiscal deficits must be paid back through taxation, and the time frame for repayment has been sharply reduced (Liu, 2011).

In response to the epidemic, the US has launched several economic stimulus plans and monetary easing on a large scale in the past two years. In just two years, the US debt has increased by nearly \$7 trillion. The US government is now in a dilemma. To stimulate the economy, rising deficits are inevitable, but the economy is likely to fall into a "double-dip" recession. Although the debt risk of the US is relatively high, the international community and most experts believe that the possibility of a crisis is unlikely. The main reasons are as follows: although the debt ratio of the US is nominally close to 130%, in fact, part of the debt is the US government's default on its own debt; At the same time, the United States has the special financial advantages

of the dollar as the world's reserve currency and the deepest capital market in the world, so the current debt scale is not enough to drag the United States into the crisis. However, some economists are concerned that a crisis in the local government bond market could have a serious adverse impact on the US Treasury bond market in terms of fiscal burden, rising financing costs, and local debt deficit. The formation path of the current debt risk in the United States is the path of the debt crisis, and the debt risk in the United States is on the path of the crisis.

Analysis of Fiscal Sustainability (Solvency) at the Macroeconomic Level in the US and Europe

The main factors affecting their deficit and debt reduction process are as follows:

First, economic growth is stagnant or declining. The neoliberal policies implemented in the US and European countries since the 1980s and the increasing indebtedness of governments, financial institutions, and the public have led to the continuous expansion of the scale of borrowing, resulting in the excessive expansion of the virtual economy. The deleveraging process of the whole economy will inevitably reduce the domestic private demand, and in this process, the sluggish consumption and investment will become normal. The fiscal expenditure scale of the governments of the US and European countries will show an overall downward trend, and the increased investment scale of enterprises will not be enough to absorb a large number of unemployed people, so it is difficult for private consumption to recover significantly. The economic downturn will lead to the decline of fiscal revenue, and the high unemployment rate will also lead to the increase of social security expenditure. Even if the government does not take additional expansionary fiscal policy, it will also expand the scale of deficit. Economic law is playing a role in forcing the US and European countries to adjust the proportion between the real economy and the virtual economy. The abnormal economic expansion in the past will be corrected and the two will reach the degree of coordination again. The economy will experience a long cycle of low growth.

Secondly, it is difficult to reduce the structural deficit. In the process of implementing neoliberal reform in the US and European countries, tax cuts have been prominent. However, the pressure of various interest groups has made it difficult to effectively reduce social welfare expenditures, resulting in long-term structural deficits. As economic growth declines, the problem has become more prominent and troublesome. In order to minimize the adverse impact of fiscal adjustment on the economy and reduce the resistance of decision-making, countries tend to take one-time measures such as cutting public sector wages and social service expenditure rather than cutting public investment and social security. Although many countries have begun to reform their pension systems, there is still a long way to go before they can fully reform their social security systems (Zhang, 2010). However, almost all countries have not made any progress in medical system reform, which is related to the fact that the medical system reform involves a wider range of interest groups and is more difficult to reform (Qiu & Li, 2013). The difficulty is illustrated by the massive mass protests that have taken place in the three countries that have embarked on pension reform: Greece, France, and Spain.

Third, the need for debt financing has risen. The financing needs of debtor countries in the US and Europe will continue to rise. The rise in total debt financing needs in the US and Europe will deepen the dependence of these countries on debt revenue to maintain fiscal sustainability and the stability of their credit relations. The main reason for the increase in debt financing needs of the US and European countries is the expansion of maturing debt. After years of peak debt issuance, the scale of maturing debt of major US and European countries

will continue to rise after 2022, with the scale of maturing debt of major financing countries such as the US, Germany, and Spain all larger than that of 2021. Due to the fact that the maturing debt will account for two-thirds of the total debt financing demand of the US and European countries, it will become the dominant factor driving the increase of financing demand. The second reason for the rise in debt financing needs in the US and Europe is that although they have generally embarked on fiscal policy adjustment, the magnitude of the fiscal adjustment is different and the overall scale of the decline is small. The extent of deficit reduction in the United States and Europe reflects differences in the pace of debt growth, financing conditions, macroeconomic prospects, and the difficulty of deficit reduction. Given the importance of maintaining economic growth momentum and the confidence in their own financing capacity, the governments of large debt countries with relatively easy financing conditions have insufficient incentives to reduce deficits on a large scale, and the adjustment range is small, such as the United States; Or even small adjustments, such as in Germany; In other countries, due to the perennial structural deficit, the scale of government debt is relatively high. Although the temporary deficit does not increase much, it is very difficult to reduce the structural deficit, so the deficit decline is small, such as Italy, Belgium, Austria, and so on.

Fourth, the US and Europe still need to be bailed out. In the post-crisis era, direct government injections of capital into the financial sector in the US and Europe have declined. However, financial institutions still face two types of severe risk tests. One is that banks' balance sheets are being tested by the rise in bad loans caused by the sluggish economic recovery. Although banks have generally strengthened their capital adequacy ratios, they are still insufficient; The other risk is that banks face looming funding pressures. The US is experiencing an upsurge in banking failures. With the possibility of a double-dip recession in the US real estate sector undeniable, and the persistence of high unemployment making it difficult to effectively reduce the scale of future bank failures, the US government initiated enterprises (GSEs) such as Freddie MAC, Fannie Mae, and the Federal Deposit Insurance Corporation (FDIC) will need significant government capital support to survive the difficulties. In the post-financial crisis era of the European Union, due to the large scale of banking bailout, which led to the rapid rise of government debt, such as Ireland, Spain, the United Kingdom, Iceland, and other countries, the fiscal deterioration, economic contraction is large, lasting for a long time, there will be a large fiscal adjustment (Hou, 2013); In addition, Greece, Portugal, France, and other countries have been in a state of high debt and weak economic growth for a long time, facing the pressure of deteriorating market financing conditions, and their fiscal adjustment is also large (Wang, 2010).

To sum up, the weak economic recovery of the US and European countries and the difficulty in reducing deficits have made it difficult for debt ratios to stabilize in the near future. However, the debt rolling pressure caused by high debt has eroded the debt bearing space of the US and European countries, and the fiscal sustainability and actual debt paying ability of the US and European debtor countries are in an unstable state.

Comparative Analysis of the Impact Mechanism of Sovereign Debt Risk in the US and European Countries

The outbreak of the European sovereign debt crisis in 2010 also awakened the world's concern about the threat of the US government debt to the global economy (Guo, 2010). Any sign of a sovereign default in the United States, the symbol of the world's highest credit rating, would put the last straw on investors' already fragile confidence (Xu, 2010). Some studies argue that all the "peripheral markets" of international finance are not big enough for a default or crisis to hit global financial markets. The real global concern is: what will happen

to the world economy if the "core" of the world's reserve currency, the United States, encounters a major risk such as the Dubai Crisis? (Ye, 2010).

But the external sources on which the US and Europe can rely for debt risk are very different. For Europe, a large part of its creditor's rights are held within the EU. For example, the European Central Bank is the largest debtor of Greece, and the solution of its debt crisis mainly depends on internal resources. The external resources that can be relied on are mainly the rescue mechanism of IMF, loan support, or bond purchase of some countries, all of which need to go through relatively difficult political coordination. Moreover, with the increase of European debt risk, the difficulty of its external financing will be greatly increased, and the flexibility of its policy will also be reduced. The United States, on the other hand, can leverage its central currency hegemony and rely on more resources. In the post-Bretton Woods system, the US, as the core country, exported liquidity to the peripheral countries and assumed liabilities at the same time, while the peripheral countries held a large number of US creditor's rights. To a certain extent, a "center-periphery" symbiotic model has been formed. The United States is still the most core country in the world, and the US Treasury bond, and the US will not face substantial financing difficulties or the exhaustion of external resources due to the downgrade of its credit rating (Zheng, 2011b).

From the trajectory of debt risk development in the United States and Europe, the response measures of debt risk in the United States and Europe are different. Since the US sovereign debt risk is a kind of impulse crisis, its response is mainly led by the US government. In the 2008 subprime mortgage crisis, in order to maintain market confidence and stabilize the financial situation, the US launched the process of "nationalization" of financial institutions, and the government also launched the \$780 billion economic stimulus plan. The country became the "last resort" for this once-in-a-century crisis. The solution to the European debt crisis is mainly to solve the debt repayment crisis, which is the international rescue mode led by the European Union and the International Monetary Fund. For example, the EU agreed to launch the Greek rescue mechanism and provide Greece with a total loan of 110 billion euros with the International Monetary Fund in May 2010. At the same time, the EU and the IMF agreed to set up the European Financial Stability Facility (EFSF), which arranged a 750 billion euro rescue package (Liu & Kang, 2022); the second round of EU rescue for Greece was still aimed at solving the debt repayment crisis of Greece and dealing with the possible risks caused by the European debt problem in July 2011 (Jiang, Li, & Liu, 2013).

The institutional causes of rising debt risks in the US and EU economies are quite different. For the US, the causes of debt impact are mainly reflected in two aspects: first, whether the political game between the two parties in Congress will abuse the sovereign credit, and whether the decision on debt issue will be more prudent and effective; Second, whether the fiscal consolidation plan is expected to be put on the agenda, and the corresponding adjustment and reform from both the revenue and expenditure sides will be carried out at the same time, so as to consolidate the foundation of fiscal consolidation. The institutional root cause of the European debt problem is the dual structural contradiction between fiscal policy and monetary policy. Facing the test of debt risk, the follow-up reform of the EU may choose two different paths: one is to accelerate the integration process, unify the fiscal policy to the euro area, and realize the fiscal and monetary integration; Second, the integration process is "backward" and the countries that do not meet the criteria of euro membership are "expelled", that is, to establish an exit mechanism for euro member countries.

Finally, the impact mechanism of sovereign debt risk is not the same. The US is a core country in the international economic system, and the systemic impact of its debt risk is more obvious. First, it is not conducive to the recovery of the US economy and the global economy; second, it may profoundly change the yield of US Treasury bonds, thus affecting global capital flows and asset prices; third, it may cause significant impact on major financial markets (Ba, 2010). As the US sovereign debt risk is to some extent caused by political issues, the credit rating downgrade is conducive to the improvement of US policy decision-making and the acceleration of fiscal consolidation, so the possibility of a new debt crisis in the US is unlikely. But Niall Ferguson, a renowned financial historian at Harvard University, has argued that the huge national debt will eventually bring down the United States (Wen & Zhang, 2022).

But the extent of the spillover from Europe's debt risks is relatively small. Most of European debt is intraregional mutual investment, which may also affect the whole world through trade, capital, and aggregate demand. However, the possibility of a new debt crisis in Europe, including default and debt restructuring, remains. If a new debt crisis were to break out in Europe, such as a restructuring of Greece's debt or the credit problems of large economies such as Spain and Italy, the impact would not be underestimated. First, the Greek debt crisis may continue to fester and eventually lead to the road of "national bankruptcy", that is, sovereign default. Greece may not be able to achieve substantial recovery of solvency under the framework of international rescue, and debt restructuring may be the last way back (Yang, 2014; Zheng, 2011b). Second, the problems of Spain and Italy are not clear yet. From the perspective of realistic development, the impact of the European debt crisis may be more realistic and urgent.

Conclusion

In short, since the post-financial crisis era when the US subprime mortgage crisis broke out, the historical experience of debt crisis and the views of experts and scholars have always been that the banking crisis broke out first and then the sovereign debt crisis broke out. The comparative analysis of the debt risk and its formation path in the US and Europe shows that the fiscal sustainability of the US and Europe at the macroeconomic level, namely debt paying ability, is also affected by weak economic growth, structural deficit reduction difficulties, rising demand for debt financing and financial rescue. At the same time, due to the different external resources and coping measures that the debt risk of the two economies can borrow, and the different institutional roots of the debt risk of the relatively vulnerable members of the European economy may be on the rise, and the sovereign debt risk may still be intensified in the short term.

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