Research of the Sustainability of U.S. Public Debt and the Influence for Chinese Economy and Finance

Zikun Xu
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Abstract
In the summer of 2010, the U.S. debt ceiling dispute attracted the attention of the world, and financial markets were shocked when Standard & Poor's finally cut the United States AAA rating. But with the increase of the debt ceiling as well as the European sovereign debt crisis intensified, the U.S. national debt problem was temporarily covered up. It must be noted, however, that the U.S. national debt has ballooned to the highest level since World War II, the ratio of national debt to GDP has reached to nearly 100%, coupled with the long-term U.S. fiscal deficit and the continuing economic stimulus policies. Its debt levels will continue to expand, and we must pay our sustained attention to the U.S. debt problem. Today, global economy is highly integrated; other countries will inevitably be affected with a nation's sovereign debt crisis outbreak. And due to the special status of the United States in the global economy, the impact on global financial markets is immeasurable if U.S. Treasury bonds default. Therefore, the sustainability of U.S. Treasuries not only affects the credibility of the United States and its economic development, but also affects the stability and development of the global economy. China, as the largest overseas holder of U.S. Treasuries, has invested most of its foreign exchange reserves in U.S. Treasuries. The sustainability of U.S. Treasuries not only affects the security of China's foreign exchange reserve assets, but also affects China's financial and economic fields. Consequently, it is of great theoretical and practical significance to research the sustainability of U.S. Treasuries, its impact on China's economy and the countermeasures to be taken by the U.S.

The sustainability of U.S. Treasuries and the measures that may be taken will certainly have an impact on the Chinese economy since China is the largest holder of U.S. debt. This paper analyzes the influence from six areas: foreign exchange reserve, exchange rate, capital flow, inflation, monetary policy, and foreign trade. The analysis shows that the measures will lead to a decline in the value and the purchasing power of China's foreign currency reserve assets, affect the autonomy of China's exchange rate fluctuations, promote the appreciation of the RMB, increase the pressure of inflation, influence the Independence of China's monetary policy, affect China's trade growth, disrupt the normal process of China's economy, and restrict China's policy options. Therefore, some measures should be undertaken to deal with the risks. China should transform the economic development pattern and restructure the economic structure. This economic transformation could promote China's foreign exchange reserves investment, diversify foreign exchange reserves portfolio, and increase the limit of foreign exchange reserves' holding by individual and enterprise investors. We also can improve and perfect the RMB exchange rate formation mechanism, promote the reform of the international monetary system and speed up the internationalization of the RMB. And U.S. treasuries that China holds can be kindly used as a counter to protect Chinese interests and enhance Chinese international influence.

Degree Type
Open Access Senior Honors Thesis

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Accounting and Finance

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Second Advisor
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Keywords
public debt, sustainability, influence, measures

Subject Categories
Finance and Financial Management
RESEARCH ON THE SUSTAINABILITY OF U.S. PUBLIC DEBT AND THE INFLUENCE FOR CHINESE ECONOMY AND FINANCE

By

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A Senior Thesis Submitted to the

Eastern Michigan University

Honors College

in Partial Fulfillment of the Requirements for Graduation

with Honors in Finance

Approved at Ypsilanti, Michigan, on this date 5/15/2019
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In the summer of 2010, the U.S. debt ceiling dispute attracted the attention of the world, and financial markets were shocked when Standard & Poor's finally cut the United States AAA rating. But with the increase of the debt ceiling as well as the European sovereign debt crisis intensified, the U.S. national debt problem was temporarily covered up. It must be noted, however, that the U.S. national debt has ballooned to the highest level since World War II; the ratio of national debt to GDP has reached to nearly 100%, coupled with the long-term U.S. fiscal deficit and the continuing economic stimulus policies. Its debt levels will continue to expand, and we must pay our sustained attention to the U.S. debt problem. Today, global economy is highly integrated; other countries will inevitably be affected with a nation's sovereign debt crisis outbreak. And due to the special status of the United States in the global economy, the impact on global financial markets is immeasurable if U.S. Treasury bonds default. Therefore, the sustainability of U.S. Treasuries not only affects the credibility of the United States and its economic development, but also affects the stability and development of the global economy. China, as the largest overseas holder of U.S. Treasuries, has invested most of its foreign exchange reserves in U.S. Treasuries. The sustainability of U.S. Treasuries not only affects the security of China's foreign exchange reserve assets, but also affects China's financial and economic fields. Consequently, it is of great theoretical and practical significance to research the sustainability of U.S. Treasuries, its impact on China's economy and the
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Key words: public debt, sustainability, influence, measures
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Acknowledgements

I take this opportunity to express my profound gratitude and deep regards to my guide Dr. Robert C. Hanson for his exemplary guidance, monitoring and constant encouragement throughout the course of this thesis. The blessing, help and guidance given by him time to time shall carry me a long way in the journey of life on which I am about to embark.

I also take this opportunity to express a deep sense of gratitude to Dr. Rebecca Sipe and John Feldkam, Honor college faculty guides, for their cordial support, valuable information and guidance, which helped me in completing this task through various stages.

I am a student of Eastern Michigan University, College of Business, thankful for the valuable information provided by them in their respective fields. I am grateful for their cooperation during the period of my thesis.

Lastly, I thank almighty, my parents, friends and my dear girlfriend Qianqian Xu for their constant encouragement without which this assignment would not be possible.

Zikun Xu
1 Introduction

1.1 Background of the Research

In 2011, the sovereign debt crisis is undoubtedly one of the world’s most popular topics. The first issue is the sustainability of the sovereign debt crisis in Europe, and in America where a bipartisan agreement raised the debt ceiling to avoid default. At the same time, one of the world’s three major credit rating agencies Standard & Poor’s downgraded the country’s credit rating. In August 5, 2011, Standard & Poor’s announced that the U.S. long-term sovereign debt rating was cut from AAA to AA+, and indicated that the rating outlook is negative. This was the first loss of AAA sovereign credit rating in U.S. history. The present U.S. economic situation, although in economic recovery, has still failed to recover to pre-financial-crisis levels. Therefore, in order to stimulate the economy, the U.S. still facing deficit pressure, continues to expand the scale of debt financing. Because the scale of debt scale in America is huge, any continued expansion would cause global attention, although the European sovereign debt crisis temporarily overshadows the U.S.’s sovereign debt expansion problem. But sometime in the future, American sovereign debt problems will become one of the key issues in international studies.

With the development of global economic integration, one country’s debt crisis will inevitably affect other economies. The U.S. is the world’s largest economy; its huge debt and fiscal deficit has attracted great attention all over the world. As the accepted global risk free asset, every act and every move involving American bonds will have
an important impact on the international financial market. Over the next few years, a potential U.S. sovereign debt crisis will become the global financial markets' biggest risk. Once the crisis erupts, the damage will be much severe than the European sovereign debt crisis. Therefore, this risk has great theoretical and practical significance in motivating the American public debt sustainability.

China is currently the largest developing country, and has the world's largest foreign exchange reserves, most of which is American government bonds. By the end of 2013, China had nearly 3.82 trillion dollars in foreign exchange reserves, 1.3 trillion dollars of which is held American bonds, a ratio of more than 1/3. Taking into account the Chinese holding of American debt amount is huge, and the credit rating of American debt has decreased, there is reason to worry about the safety of China's assets in the United States. But in the current global economic situation is complex with ever-changing circumstances, the huge amount of American debt is not the only impact of foreign exchange reserves. China’s foreign reserves are also affected by depreciation of the dollar and inflation pressure, which will also affect local politics. Therefore, from the point of view of China, researching American debt especially sustainable public debt undoubtedly has important applications to China's national interests, including how to protect their own interests in order to cope with the effects of American debt.

1.2 Objectives of the Research

This study mainly studies U.S. sustainability of public debt to see whether the U.S. can continue to obtain new debt financing from the global market for its domestic fiscal
deficit in the future. The study also review the impact of China’s dollar foreign reserves on the sustainability of U.S. public debt financing and the China can use to deal with possible risk.

Through the analysis of the current situation of American public debt and measures to resolve the concerns about high debt levels, this study tries to find out the effect of U.S. debt on Chinese - American economic and financial relations. On this basis, from a macro point of view to explain the perplexing in the current political and economic environment, what kind of measures should be taken by China due to its huge holdings of US debt.

1.3 Structure of the Research

This paper is divided into six parts:

The first part is the introduction.

The second part is the literature review. This section expounds the definition and influence factors of government’s public debt sustainability, as well as related research.

The third part is the empirical analysis. Through the empirical analysis of U.S. and European debt held in China and comparisons to illustrate the validity of the model and stability, the study attempts to judge whether American public debt is sustainable, and draws conclusions about the possibility to reduce the debt scale and future challenges.

The fourth part discusses the influence U.S. debt on the China. First to analyze the present situation and the reasons for China holding U.S. debt, to understand the rationale for its huge holdings of U.S. debt. Then, from the different aspects of public
debt such as foreign exchange reserves, exchange rates, inflation and others, discuss the sustainability of the debt and predict the effects to all aspects of Chinese economic and financial health after China takes measures to reduce risk associated with U.S. debt holdings.

The fifth part are the countermeasures China may adopt to deal with the risk and put forward the relevant policy recommendations.

The sixth part summarizes the research results and limitations of this study, and offers a conclusion.

**Chapter 2 Literature Review**

**2.1 Definition of Sustainability of Public Debt**

The government's public debt refers to debt issued to the public, institutions and foreign governments and investors to make finance deficits and to meet the specific needs for funds. The U.S. as an example, American bonds are issued by U.S. Treasury, the federal government provides credit guarantee, and these debts are often regarded as default-risk free assets. Publicly held debt in total government debt accounted for a relatively large proportion, thus, in the study of debt sustainability the focus on public debt rather than the total debt, so only the public debt is included in the analysis.

According to the definition used by domestic and foreign scholars, the government's public debt sustainability means that the government cannot in the long term run a Ponzi financing scheme by borrowing from new investors to payoff old
investors. If the government does not constrain the scale of debt, relying on new borrowings and expanding the size of its debt, the government debt cannot continue. As long as a country’s debt burden rate (usually measured by the ratio public debt / nominal GDP) is kept low to maintain stability, higher debt scale and scale of public debt is kept moderate, borrowing can be sustained. The public debt / nominal GDP ratio can be understood as public debt sustainability measure.

2.2 Factors Influencing Sustainability of Public Debt

The factors influencing the sustainability of government public debt, include:

1. The rate of economic growth.

No doubt, the rate of economic growth is an important factor to influence the government’s public debt sustainability. High economic growth can increase the country’s GDP and decrease the public debt / nominal GDP ratio since the denominator is increasing; economic growth can also increase corporate profits and income growth, increase tax receipts, and reduce the government deficit, thereby reducing the public debt scale. At the same time, rapid growth of the national economy also helps to strengthen domestic and foreign public investor confidence, increase the demand for public debt, reduce interest expenses, and is also conducive to control the scale of public debt. Obviously, high economic growth is bound to reduce the scale of public debt, given the inverse relation between the two.

2. Public debt interest

Interest payments on public debt are a burden on the government and should affect
the size of public debt. Under a high interest rates, the government financing cost is higher, and the more heavy the debt burden. Government debt affordability is usually measured using interest payments and income tax ratio. Moody’s sovereign debt rating for the United States’ rating from AAA to AA. They also set a 10% warning line, if the debt interest rate rises above this ratio, the possibility of a downgrade will increase the cost of financing, the government interest burden will further increase, affecting the sustainability of debt. Therefore, public debt interest is another important factor of sustainability.

3. The basic deficit rate.

The basic deficit rate refers to the ratio of basic government deficits to and nominal GDP. The basic deficit excluding interest payments after the fiscal deficit is:

\[
\text{The basic deficit} = (\text{government spending} - \text{interest payments}) - \text{government revenue}
\]

National debt is a source of revenue, the main function is to make up for the fiscal balance, therefore, high deficit will inevitably lead to expand the issuing debt, interest on the debt will lead to larger deficits, and the scale of debt, into a vicious circle. Therefore, the basic rate of deficit is one of the factors that affect the public debt sustainability. Basic deficit reduction is the most important financial control ability of the government, namely fiscal discipline. Therefore, the willingness and ability to cut the deficit and control of government debt will be a key factor in deciding whether a country’s public debt is sustainable.

4. The unemployment rate

7
The unemployment rate is an indicator of the country's economic growth and is very important, especially in the western developed countries. It's an issue that the government has to consider. Low unemployment means the social stability, and vice versa, high unemployment social unrest. The reason why the unemployment rate is an important influence factor is because American public debt sustainability analysis must take into account a specific American practice, where unemployment is one of the important bases for the Fed's monetary policy. The American employment rate is also a vane of each index that will impact the international debt market. As a result, the unemployment rate needs to be analyzed. A high unemployment rate will make the government introduce various measures to stimulate employment, thereby increasing fiscal expenditure which will expand the scale of debt. U.S. President Obama recently has called for increased government spending, and tax cuts to reduce the unemployment rate and also lay the foundation for his re-election, but this must inevitably lead to debt scale expansion.

There are many other factors that affect the size of the public debt, such as political, military, natural disaster, war and other emergencies, but these factors cannot be quantified in the analysis. Therefore, the above four enumerated factors were studied.

2.3 Previous Studies

1. The definition of public debt sustainability

From the perspective of economics, two metrics are used to measure a country's debt: a total government debt and public debt. Public debt is defined as how much a
country owes to its lenders. These debt holders could be individuals, businesses and other countries' government. It is often referred to as sovereign debt. Total government debt is equal to public debt plus the debt the government itself owns. American's Public debt has substantial amounts that are held by other government departments outside the country. Therefore, the academic research on government debt is focused on public debt rather than total government debt, while much of the research is from the perspective of public debt sustainability of government debt. To study on the sustainability of public debt, we must first understand the definition of government's public debt sustainability. According Hamilton and Flavin (1986), Bohn (2005), van Wijnbergen and Budina (2008) and Arjan Lejour, Jasper Luitkezen, Paul Veenendaal (2010), public debt of a country should not be consistently in "Ponzi financing" mode. "Ponzi financing" refers to generating returns for old investors by continuing to absorb new investors, when new investors stop investing, the system will collapse. Hamilton and Flavin (1986) think that if a government does not constrain debt, the continuous expansion of the scale of debt will rely on borrowing to pay off existing debts and interest, then the government will not be able to repay their debts over the long-term, which will eventually lead to a sovereign debt crisis, that is to say the country's debt is unsustainable. Bohn (2005) suggest that the value of future earnings of the government should be greater than or equal to the initial debt, which is the aim of government revenue and earnings. If government was involved in a "Ponzi financing" mode, the initial debt will never be repaid, and rational investors won't buy the bonds, therefore, the government should not fall into "Ponzi financing" mode. Van Wijnbergen and Budina (2008) suggest that
the present value of government's existing wealth and future income should be at least equal to the present value of existing non-interest expenses and ongoing expense. Lejour, Jasper Lukkezen, Paul Veenendaal (2010) think that the government should satisfy the budget constraint, but not endlessly use the new issue debt to pay off old debts.

2. Research methods of public debt sustainability

At present, there are two main research methods in public debt sustainability. The first method adopts to establish an intertemporal budget constraint model of government, to see whether public debt conforms to the constraint, the amount of debt and other data inputs the constraint conditions, and the transversality condition, and whether the government can meet the conditions of the debt. Bohn (2005) examines data from 1792 to 2003, and suggests that the economic growth effect is enough to cover the debt interest payments. American debts satisfy the intertemporal budget constraint conditions and the transversality condition, and can be sustained. Chinese scholar Zhang Jun, Li Daye (2011) argues that public policy often has a strong continuity, so the test conditions of the model should include the basic factors affecting the budget period of the basic budget, and also include post World War II and other non-economic factors on the budget and public debt. They select U.S. data during 1955-2010, if the nominal GDP growth keeps at 5% in a long run, they forecast that public debt, U.S. long-term stability level of nominal GDP ratio was 46%, is much lower than 90%, the upper limit of causing substantial damage to the economy. They conclude that government debt not only can remain, but also have smaller negative economic effects.
The second method is more empirically focused, mainly related to a government debt index, such as the sustainability of the public debt to the nominal GDP ratio with a particular historical level compared to identify public debt. If the public debt/nominal GDP ratio is higher than the historical level, we conclude that the debt of a country is not sustainable in the long run. One of the more important standards is related to provisions regarding the EU "influential Maastricht Treaty". Government bonds compared to nominal GDP should not exceed 60%, although several European countries have recently exceeded the standard, the standard still has certain reference significance. Reinhart, Carman and Rogoff (2010) indicate that 90% is the limit of public debt to the nominal GDP ratio. Exceeding this warning line long-term interest rates will rise, economic growth will be seriously affected, the debt burden will further rise sharply, and a country's economy would be difficult to operate normally. This empirical rule, the high-low level of debt/nominal GDP ratio is a useful measure of sustainability.

The two methods are commonly used in the research, although the first method is more widely used. Because the special status of U.S. treasury bonds in the world, using the second method with the American debt to GDP ratio will draw the wrong conclusion. Lei Chengyao (2002) pointed out that due to different national conditions, measures of economic development level, economic systems and economic structure if summed up and compared to the warning line to judge a country's national debt scale, although reasonable, the results are often not convincing. American status by virtue of its powerful military and economic strength and the US dollar as the global reserve
currency, can issue more debt than any other country, which makes American bond issues incomparable with other countries. From the history, American public debt to nominal GDP ratio has often been higher than 60% for many years, and the highest ratio was more than 100% during World War II, but America still did no default. This indicates that using a simple index makes it difficult to make a correct analysis.

Using the above research methods, the U.S. Treasury produced several studies basic U.S. public debt can be sustained, but the Treasury's conclusions are not universally accepted and many scholars think that U.S. still faces severe challenges. Former Treasury official Roger C. Altman (2010) suggests that American debt level has reached an unsustainable level. He argues that if the American government in the future wants to reduce the scale debt and fiscal deficits, it will be necessary to reduce defense spending, including reducing troops abroad, reduce the global anti-terrorism funding, in order to reduce the government budget. However, reducing the Allied military aid and so on is bound to affect the U.S. global influence, and the attractiveness of U.S debt will decline. Zhang Jun, Li Daye (2011) think that American future economic growth may decline, fiscal discipline may weaken, bond interest rates are likely to rise, and these three factors are the keys factor to influence the sustainability of American debt, but America is still faces major challenges in the future.

3. The sustainability of American public debt and the effect on China and Chinese Countermeasures

China has more than 3 trillion in foreign exchange reserves, of which nearly 1/3 represent investment in U.S. bonds. Therefore, trends in American debt trend is bound
to affect the safety of Chinese dollar assets. Although American bonds have no significant default risk, the long-term sustainability is still an ongoing discussion question, and should China take early measures to protect the value of its dollar assets, China. Therefore, research involving American debt’s future long-term sustainability and the risk China faces and the countermeasures that should be adopted should be the trend of future research.

At present domestic academic studies about whether China should reduce or increase holdings of American treasury bonds in the future are still inconclusive. Kong Liping (2009) think Chinese reserve assets, mainly in dollars and in American government bonds, is causing existing investment profit and loss risk, exchange rate risk, liquidity risk and credit risk, and that China should reduce its holdings of dollar assets. Lu Xiaoming (2011) thinks of China as America’s debt creditors, and as such is exposed to credit risk, market risk, inflation risk, and value risk related to income risk and portfolio risk. Rational planning and risk control may make it appropriate to sell some bonds to avoid future risks. Yu Yongding (2011) also believe that China should now be reducing as much as possible its holding of dollar assets, especially it should as soon as possible reduce the accumulation of long-term debt. In contrast with this view, Zhu Bangning (2009) suggests that the main investment direction in the future of Chinese reserves will still be American bonds. Of course, some scholars are also neutral, Yi Xianrong (2010) argues that Chinese foreign exchange reserves are the accumulation of years of national wealth, and should be based on market rules as the principle of management and investment. Therefore, overweight or the reduction of American
bonds should be judged by the law of the market. Chen Xinping (2009) analysis of American bond issues, suggest that China is already in a nice position, where either over-weighting or under-weighting will show some negative effects.

Brad Setser (2007), he thought that if the Chinese do not buy long-term American Treasuries, U.S. long-term bond yields will rise at least 50 basis points, damage both American's and China's economy. Therefore China will not likely stray from current policy. Wayne M. Morrison and Marc Labonte (2011) think that if China reduce the scale of American bonds holding, its effect will cause panic in the market, the sharp interest rate rise will tip American into recession, and the global economy will also follow the panic, including China, therefore, China is not likely to take the risk.

Thus, China’s continued holdings of U.S. bond is inconclusive, and will still be a problem that is worth to discuss. But whether over-weighting or under-weight dollar reserves will result in change to Chinese policy, such as taking effective measures to avoid the risks, is the subject of academic research. Research in this area mainly reflects how to effectively manage foreign exchange reserves. Kong Liping (2009) think China should draw on the experience of Norway, and manage foreign exchange reserves according to precautionary demand, profitability requirements, and transaction demand. To ensure the needs of the four different demand motives, establish different combinations, and manage by different organizations, so as to reduce the foreign exchange reserve asset management risk, and improve the efficiency of management. Zhang Rui (2011) put forward three proposals for foreign exchange assets: investment diversification, pay attention to the International Monetary Fund and other super
sovereign bond investment, improve the proportion of gold holdings, and increase oil, mineral and other strategic resources and goods configuration. Wang Xiaojun, Liu Liji (2010) argues that China should carefully choose the timeliness, gradually reduce dollar assets, up the foreign exchange reserves to invest in gold, factor of production, talent, technology and other strategic materials reserves, so as to avoid the risk of foreign exchange reserves. Zhong Wei (2011) suggests that reserves are divided into hedge reserves and deposit reserves. Hedge reserve correspond to the central bank sterilizing the liabilities formed by fixed income assets, Deposit reserves are also called net foreign exchange saving reserves, and correspond to an export-oriented economy accumulating, shares and resources as the main investment portfolio given proper consideration of outstanding enterprises and large emerging economics. Ba Shusong and Liu Xianfeng (2007) think that China needs to clear the foreign exchange reserve demand motive, on this basis, the establishment of different investment portfolios, and the establishment of a professional investment management company, improve the foreign exchange reserve management system along with the system of laws and regulations to make the best use of the foreign exchange reserves. Zhang Bin (2011) suggest that China should manage foreign exchange reserves by setting a goal of future real purchasing power maximization and sustained growth in foreign exchange reserves through the establishment of foreign investment of pension funds in the stock, diversification of investment and other means to achieve this goal. Lu Xiaoming (2011) argues that China should use a more general portfolio investment and management model in the foreign exchange reserve investment decisions, analysis of risk and return, and asset allocation.
This discussion shows that the effect of Chinese held U.S. debt and what countermeasures should be taken by China. This analysis is mostly confined to the level of foreign exchange reserves, rather than from a more macroscopic angle. In fact, because the Chinese buy large amounts of American debt, the effect is not only reflected in the level of foreign exchange reserves, but also relates to the economic and financial aspects of the country, and even spills over into the political area. Therefore, this study tries to analyze the problem from a more macro level along with corresponding countermeasures.

Chapter 3 Current Situation and Reasons for China Holding American Public Debt

3.1 Current Situation of American Public Debt

In 2011 America's bipartisan debt debate and the Standard & Poor's rating agency downgraded of America's credit rating, caused the U.S. national debt problems become the focus of public attention. At the end of 2011, U.S. debt amount to $14.764 trillion, and the nominal GDP ratio reached a staggering 98.7%, close to 100%, Public debt accounted for $10.128 trillion, and the nominal GDP ratio reached 67.7%, the highest level since World War II. The safety line is usually considered to be 60%. In 2011, with the U.S. population close to 312 million, per capita public debt was nearly $33,000.

From a historical point of view, America's total debt and public debt shows absolute growth trend as shown in Figure 3-1. In 1940, America public debt of $427
billion soared after World War II. After the end of World War II American public debt has doubled 6 times, reached about $240 billion. For almost 30 years after World War II, American public debt was relatively stable, with little rise or fall, and even declined in 1975 with the Nixon administration's budget surplus. But since about 1980, with the U.S. involved in Middle East Wars, terrorism, government tax and financial crisis relief, there has been a rapid expansion of government public debt with now more than $10 trillion in public debt. Another trend seen in Figure 3-1, is that over most of the period the growth in public debt paralleled total debt, but since about 1980 total debt has increased more than public debt. A more serious problem is American fiscal deficits in the future. According to CBO (the Congressional Budget Office) in 2012, the budget deficit is expected to be $1.33 trillion in 2013, which means that U.S. debt will continue to expand, high fiscal deficits will be a tough challenge facing Americans in the future. The Wall Street Journal reported in 2012 that American again will reach the $16.394 trillion debt ceiling.
Figure 3-2 shows American total government debt and public debt ratios to nominal GDP. The figure shows that both ratios in the period of World War II reached their highest levels, about 90%. After reaching an intermediate peak about 1995, the total debt / nominal GDP and public debt / nominal GDP ratios are at the highest level since the Second World War. In particular, we can see, in 2008 after the financial crisis, the ratio of debt to GDP shows a rising accelerating trend, so we must pay attention to sustainability.
3.2 Current Situation of China Holding American Public Debt

With the continuous development of China's economy, the current account and capital account are both in surplus. Coupled with the capital account is the national system of buying and selling foreign exchange, foreign exchange reserves from expansion. In accordance with the principle of safety and mobility, the principle followed by the China Foreign Exchange Reserve Management Bureau of the State Administration of foreign exchange, Chinese foreign exchange reserves are invested in dollar assets in order to ensure the safety principle. Because of the U.S. government guarantee, US Treasury bonds are regarded as risk free. From Figure 3-3 we can see that since China joined the WTO, there has been a rapid growth of foreign exchange reserves, ten years up nearly 15 times, to the end of 2011 the level is close to $3.2
trillion. With the growth of foreign exchange reserves, China's holdings of American bonds also reflects the rapid growth in the Chinese economy. In 2001 China held debt of only $78.6 billion, but by 2011 the balance reached a staggering $1.151 trillion. At the same time, China may have to buy American bonds indirectly through overseas enterprises, and the actual holdings of U.S. debt may be larger than published. In September 2008, China rather than Japan, for the first time, became the largest creditor to American, and in 2010 the holdings of $265 billion a year was a record. But in 2011, due to America debt ceiling battle and the US debt downgrade and other reasons, China began to consider the safety of assets in the United States, and whether to reduce US debt, although this did not affect China as America's biggest foreign holder of debt. As shown in Table 3-1, by the end of 2011, China held an American debt balance of US $1,151.9 billion, accounting for 23.03% of U.S. bonds held overseas, and accounting for 11.37% of total U.S. public debt.

![Fig. 3-3 China foreign-exchange reserves and holding American Treasuries](image-url)
Source: China Administration of Foreign Exchange & Wind database.

Table 3-1 The Top ten countries (regions) holding American Treasury

<table>
<thead>
<tr>
<th>Country (Region)</th>
<th>Holdings (Billion)</th>
<th>Percentage (%)</th>
</tr>
</thead>
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<tr>
<td>Belgium</td>
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Holding structure, as shown in Figure 3-4, as of 2011 June, China holdings of dollar assets, only 9.21% are invested in equities, the remaining more than 90.79% investment in American bonds, while in the investment American Treasury, is almost entirely invested in long-term debt, short-term debt in the proportion of almost nothing. This shows that China in US debt investment is not balanced, too much focus on long-term debt, not diversified investment, to resist interest rate risk.
3.4 Reasons for China Holding American Public Debt

1. The rapid growth of Chinese foreign exchange reserves.

The rapid growth of China's foreign exchange reserves is the most important reason for its huge holdings of U.S. bonds. Since the reform and opening up, especially after China accession to the WTO, foreign exchange reserves have increased at an annual rate of more than $100 billion to $300 billion, as shown in Figure 3-5. This is mainly due to the current account and the capital account surplus in China's export-oriented economy. As shown in Figure 3-6, since entry into the WTO, China's annual current account is in surplus, and maintained a high growth rate, although the surplus declined because of the financial crisis, but still maintained after the crisis at more than $200 billion the capital and financial account surplus. But most Chinese foreign reserves are in dollars, according to a rough estimate by scholars, dollar reserves
account for 2/3 or more of the total. Because these dollar reserves generate income, there is no revenue opportunity cost. Therefore, China will use these revenues to invest more in America debt, to get income. As seen from Figure 3-6, China holds American bonds and foreign exchange reserves in proportional to the level of reserves, therefore, China's rapid growth of foreign exchange reserves is the primary cause of its huge holdings of US debt.

![Fig. 3-5 foreign exchange reserves of China](image)

Source: Wind Database
2. America debt is large enough, the liquidity is good enough.

The market for U.S. Treasury securities is probably the only one in today's global market large enough to accommodate China's huge foreign exchange reserves, which the European bond market, Japanese debt market, and the gold market cannot do. IMF data shows that U.S. bond issuance accounted for more than 30% of the whole world bond market. Ranked second and third are Germany and Britain, which accounted for only about 10% each. On the other hand, a large America bond market is the world's most liquid bond market, coupled with America's developed financial markets, free trade, and convenient realization make it the only market the Chinese need to use. China's sources of foreign exchange reserves include foreign direct investment and international "hot money," which account for a large part, coupled with domestic enterprises that import and export and generate foreign exchange. In order to meet the needs of enterprises and prevent capital flight and some daily international payments,
foreign exchange reserve assets can at any time be subject to delivery requirements, the liquidity of American bonds just meet this point.

3. America Treasury has good security.

U.S. treasury securities must be considered from two aspects. One is from the Chinese point of view, where the foreign exchange reserve is a national asset, not like other investments as a way to generate yield, and should take safety as the primary principle. Therefore, the state of foreign exchange reserve investment requirements ensures safe principle to achieve value-added. On the other hand, American bonds are regarded as risk free, because they are guaranteed by the credit of the United States, that has solid and well-developed economic support, plus a strong military, and world currency backing. The U.S. from both the political, military, and economic point of view is at present the world's most stable and reliable country, therefore, investments in U.S. bonds get relatively small fixed income with low risk and high security.

4. The core of international monetary system the dollar

Although the dollar's international status will be affected by the recent financial crisis, but because of depth of the American bond market, the dollar’s status in international foreign exchange transactions, economic fundamentals, and America's position among developed economics is relatively outstanding of a long period of time, the dollar is still the dominant currency in the international monetary market. According to relevant research, the dollar's share of global reserve currency is large. From Table 3-2, the dollar’s share of transactions in the foreign exchange market is more than 80%, which indicates that the dollar is the dominate currency in the international market. The share,
however, has declined recently from a weak dollar policy and the financial crisis. The dollar's share declined about 2% points to 85%, while the euro share has increased almost 2% to 39%.

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<td>0.1</td>
<td>0.5</td>
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5. The global scarcity of high-quality assets.

Global high-quality assets scarcity is another important factor leading to China's investment in U.S. debt. In the global asset market for gold and other commodities, the volatility of commodity prices are high, and the costs are high; other developed country bond yields vary greatly and the operational risk is not conducive to large-scale investments; in developing countries, financial markets are not perfect, trading mechanisms are not standardized, and asset quality is not high, which leads to lower quality assets compared to the US dollar. In the post crisis environment, these concerns are more obvious. Sharp fluctuations in the price of gold and other commodities, the European bond market yields continue to rise, therefore, the U.S. with its deep financial markets and high quality of financial assets will still attract global investors. Caballero and Krishnamurthy (2009) think, it is the strong global demand for American low risk
bonds that leads to U.S. economy's excessive leverage and global imbalances. But also because global high-quality assets are scarce, China will hold the majority of its foreign exchange reserves in dollars and continue to invest in U.S. bonds.

6. Factors of national strategy.

Although the State Administration of Foreign Exchange Bureau, the Ministry of Foreign Affairs, and the central bank have been insisting that overweight or underweight investments in the American bond market is based on investment behavior, not politics, the market should be interpreted correctly. But any relation between the world’s largest economy and military power, and the world’s largest developing country with a bright younger generation and rapid economic growth, will inevitably involve the politics of natural interest. Chinese holding of such a huge amount of America bonds will lead America to be more attentive to China. American cannot ignore China’s development or violate China’s national interests. Likewise, with so much invested in American securities, China need to pay attention to US interests if it wants to get its capital back. So there is common interest in developing stronger ties between the two countries. From China’s perspective, this will enhance China’s international status and strengthen the confidence of the international community.

Chapter 4 Influence of American Public Debt on Chinese Economy and Finance

The huge amount of U.S. debt held by China will inevitably link Chinese economic and financial policy with the performance of these bonds. The recent financial crisis in
US and issues with sovereign debt of less developed countries illustrate the point.
America's continued loose monetary policy, weak dollar policy, expanding deficit
financing, low interest rates, low current inflation, and monetary policy all affect the
supply of debt and interest rates. Future deficit reduction measures will have an effect
on the US economy and these effects will ripple through the economies of other
countries, including China, and will have a huge impact on the political, economic, and
financial aspects of Chinese life.

4.1 Influence on Foreign Exchange Reserves

American debt reduction measures will have the most direct impact on Chinese
US dollar reserves. Chinese foreign exchange reserves amounted to $3 trillion, of which
USD assets accounted for about 2/3 of the total. Since the vast majority of reserves is
in U.S. bonds, the value of these reserves are at risk from U.S. policies that affect the
value of the dollar, and the value of these securities held as reserves.

1. Debt dilution risk.

Although America can adopt measures to restrain the risk of default, the need for
deficit financing is huge, which will require that the U.S. issue even more debt. In
addition, low interest rates along with slow economic growth provide even more reason
to borrow even more. According to American Congressional Budget Office estimates,
a balanced budget is unlikely given weak economic growth, large deficits will become
the normal state, and the need for additional debt financing will continue to expand.
Unless China's holdings of U.S. bonds keeps pace with increasing levels of U.S. bond
issues, China's holdings of American bonds will face greater dilution risk. Apparently, China's current large proportion of dollar denominated reserves, and current economic conditions, make it difficult to increase the absolute dollar value of reserves, which will result in increased dilution risk. This will reduce China's influence and also the depreciation of foreign exchange reserves.

2. Decline Risk in investment income.

Lowering interest rates in order to obtain low interest financing and a creating inflation strategy will make China's future investment yields lower, and further reduce the tiny foreign investment rate of return. The possibility of reducing the amount of Chinese reserves from current levels is almost zero. Therefore, future Chinese foreign exchange reserves still show a considerable need to invest in American debt. Continued low yields on American bonds will also increase the opportunity costs of China's continued investment in U.S. bonds. The Federal Reserve announced on the morning of September 14th, 2012 the launch of a third round of quantitative easing (QE3) where every month they will buy $40 billion of mortgage backed securities, and maintain the short-term zero interest rate policy at least to 2015. This policy will further depress U.S. interest rates and greatly affect Chinese investment yields. Figure 4-1 shows that in June 2012, U.S. 10-year Treasury yields continued at a low rate, about 1.5%, but by June 2013 the 10-year yield increased about 50 basis points to just above 2%, still low by historical standards. If you consider that China might hedge its foreign exchange reserves, China's rate of return on investment may even be negative.

Figure 4-1, 2012 & 2013 June Treasury Yield Curve.
3. Foreign exchange reserve risk.

To maintain its economy and also reduce debt repayment pressure, America may adopt a weak dollar policy. A weak dollar will lead to a decline in the value of China's dollar denominated reserves and a decline in purchasing power. Some scholars believe that the shrinkage in value of dollar assets held by China will be relative to the Renminbi (RMB) because only when the bond matures and the dollars exchanged for RMB will we be able to judge the value of asset impairment. But even so, impairment could be large. For example, the US dollar – Renminbi exchange rate from July 21, 2005 to the end of 2011 declined from 8.11 to 6.30, a change of nearly 22%. By some estimates, over this time period the depreciation of the dollar resulted in Chinese foreign exchange reserves losing nearly $660 billion.
4.2 Influence on Exchange Rate

American debt reduction measures will have a direct impact on the exchange rate of RMB against the US dollar, forcing the passive appreciation. Since the collapse of the Bretton Woods system, the dollar is no longer pegged to gold, but the dollar is still the core of the international monetary system, and still unable to shake off the Triffin dilemma. In choosing between the maintenance of their own national interests and the maintenance of world interests, the U.S. will still choose to protect themselves. Therefore, even though the US dollar is the international currency standard, the US will adopt policies that affect exchange rates that could benefit its national interests at the expense of other countries. On the one hand, due to debt, the fiscal deficit has expanded fast, has attracted world attention, and the long-term sovereign credit rating was questioned by Standard & Poor’s. To maintain its credit rating, the US will have to cut the fiscal deficit, which would lead to a decline in the future fiscal policy on economic stimulus. In this case American will rely more on loose monetary policy, rather than fiscal policy, to stimulate economic recovery and promote employment, which will lead to global dollar liquidity and passive appreciation in value of RMB. Since the Fed launched QE3, the Yuan (unit of RMB) against the dollar has hit nearly 4 month high of 6.3188, higher than the middle price of 6.3317, this shows that U.S. monetary easing will cause RMB appreciation.

On the other hand, the depreciation of dollar value can reduce the real value of debt and reduce debt repayment pressure. This is a motivation for America to control the dollar value. At the same time, in order to maintain the dollar and U.S. debt position
in the world, and to keep the appeal of American treasury bonds, America will suppress other currencies, which may pose a threat to the yen and euro. But now, the RMB will be the primary currency to be shocked. With an increase demand for RMB in the future, the RMB appreciation will also increase the possibility of economic friction between the two countries.

Figure 4-2 shows that after the 2005 Chinese exchange rate reform, the RMB has experienced a long-term appreciation against the dollar, from the 8 level in 2005 to the 6 level in 2013. The continued appreciation trend is clear, although due to the European debt crisis, the global economic downturn, the Chinese economic hard landing, and concerns that investors choose the dollar as a safe haven, the appreciation of the RMB against the dollar rate has slowed in recent months. As long as the US economy does not appear to change fundamentally, the RMB appreciation trend will not change. According to a U.S. weak dollar policy, the U.S. will still make the RMB appreciate and shift their problems to China.
Fig. 4-2 The middle price of RMB ($100 convert to Yuan)

Source: Wind Database

While the dollar’s devaluation and revaluation of the RMB will make China face the pressure of appreciation of the RMB against the dollar, the appreciation is not caused directly by the China’s activities, so there should be no meaningful effect on the autonomy of China. Passive appreciation of the RMB has negative influence for planned Chinese economic transformation. At present, China’s enterprises, especially foreign trade enterprises, are still considered as labor-intensive enterprises, although the added value created is not high, they absorb a large number of workers. Passive appreciation of the RMB will lead to the price increase of exports, and reduce the international competitiveness of export products. Many export-oriented small and medium enterprises (SME) in China will be impacted. Once a large number of enterprises start to lay off employees, the pressure on Chinese employment will increase, and this will definitely affect the economic growth and cause social instability.

At the same time, the expected appreciation of the RMB will lead to short-term
international arbitrage capital inflows. The international economic outlook uncertainty causes capital outflow from China, but as long as the global economy will not experience any fundamental turning point in the future, China still is one of the important objectives of capital inflow. In China, the inadequate investment environment derives the “hot money,” its main investment direction will be the real estate financial market, high profit growth area and these investment will easily lead to economic bubbles, manufacture economy “warm” illusion, further exacerbated the market speculation which will affect the healthy development of the market. For nearly two years, China imposed lots of regulation on the real estate market to curb skyrocketing housing prices, and has obtained certain result so far. If there is no adequate governance on such “hot money” investing, prices of real estate will rebound. The emergence of the price bounce will bring enormous pressure to the monitoring and management China’s market. As a result, government needs to exert more effort to avoid such results. In addition, the government also needs to exert greater effort to deal with the possible adverse effects and risks of asset bubbles, and market fluctuations in the economy caused by the outflow of “hot money.”

4.3 Influence on Inflation

Another direct effect on China from American debt reduction measures is that it will push up inflation pressure. The influence on Chinese inflation has several aspects to consider:

First, America’s continued loose monetary policy and continuous dollar printing
will promote the spread of global dollar liquidity, low interest rates, and is making the
dollar as the world's best arbitrage currency. Once the U.S. economy, and global
economy rebound, investors' risk aversion will subside, risk appetite will increase and
the market will prompt "hot money" to seek high return investments. As Europe and
the United States economy continues low future growth, and the Chinese economy
continues to grow, China will offer more favorable investment opportunities for "hot
money." IMF forecasts for global growth in the future suggest developed countries
economic growth rate at 2%-3%, while developing countries are generally 6% or above,
and the prediction for China is about 8%. As long as China's economy is not
fundamentally turning lower, capital in the future will still flow into China, pushing up
asset prices and inflation. Moreover, if the central bank continues to buy foreign
exchange, passive issued large amounts of money will add to the pressure of inflation.
Figure 4-3 below shows that, in the 2005 to 2007 period, China's high speed economic
growth, large inflow of foreign capital, central bank's passive monetary expansion,
pushed China's CPI way up. Therefore, America's central bank increase in money
supply will push up the inflation pressure in China.

Second, because the dollar is an international reserve currency, international
monetary settlement, crude oil, nonferrous metals and other key commodities are priced
in dollars. Therefore, the long-term trend of dollar depreciation and quantitative easing
policies lead to the flood of liquidity and will inevitably raise international commodity
prices. As an emerging economy, China's economy maintained rapid development,
crude oil and other energy demand continues to grow, the higher degree of dependence
on foreign energy resources, so the economy is more sensitive to price changes in international commodities. International market commodity price increases will lead to imported inflation pressure. Accordingly, the rise in commodity prices will raise the cost of production, and will increase cost push inflation pressure.

We also can see from Figure 4-3, that from July 2005 to July 2008 the Chinese CPI (consumer price index) remained high, fell to negative territory in late 2009, but rebounded in the face of American actions to resolve the subprime crisis. After fall 2009, America launch two rounds of quantitative easing causing a rise the Chinese CPI, reaching nearly 6% in 2011. Since then, because the international economic environment, the CPI shows a downturn and inflation has come down. However, due to a looser U.S. monetary policy, the world's other major economies are likely to follow the loose policy, which will push up Chinese future inflation. Therefore, a rising level of inflation pressure cannot be ignored. Over the next few years the inflation situation has the very big level of uncertainty, but CPI trends indicates that China will face high inflation pressure.
No matter from which aspect discussed above, U.S. debt reduction measures will push up China's inflation. There are at least three major hazards of the rise of inflation:

First, inflation will worsen China's unequal income distribution structure. The rising inflation will make the rich richer and the poor poorer, and further differentiation of the income gap of residents will hinder Chinese reform of the income distribution mechanism. Land, capital and other property owners only can offset the loss through the increase of capital value caused by inflation. There may be some benefits. But most ordinary people can't overcome the effect of inflation on wage income. At present, Chinese income distribution presents a polarization trend. According to some scholars, in 2010 the Chinese Gini coefficient reached the level of 0.5, much higher than the international warning line of 0.4. The income distribution reform mechanism is imminent, and high inflation is clearly drawing the distribution further apart, which will only worsen the situation.
Second, inflation would inhibit consumption, because it is not conducive to stimulate domestic demand. Inflation means that prices generally rise. Once income cannot keep up with the inflation rate, the cost of life of the residents will increase, consumption capacity and consumption willingness will decrease. This will greatly inhibit Chinese residential consumption, and is not conducive to stimulating domestic demand to achieve Chinese economic transformation. At present, China's economy is more relying on foreign trade and investment in order to stimulate economic growth, this mechanism will be more likely to lead to inflation, make the economy fall into a vicious spiral, and it is not conducive to the improvement of living standards as well as the development of the nation.

Third, inflation will push up Chinese asset prices, resulting in a false illusion of prosperity. Commodity prices should be determined by supply and demand market, while inflation changes the rules. Commodity prices inflation is largely due to consumer price rises and further increases caused by public panic or the speculating profits generated by a producer. All of above will cause information distortion, and the distortion is likely to promote the further rise in prices. This series of impacts have seriously affected the Chinese market mechanism formation that is the price determination of supply and demand, and cause an irrational distribution of the Chinese social economic resources.

4.4 Influence on the Stable Operation of the Economy

Debt reduction measures by America influences inflation, exchange rates and has
an indirect negative effect on the stable economic operation of China. The negative
effect has several conduction channels.

I. From the perspective of trade analysis

The depreciation of the dollar, the appreciation of the RMB, will impact Chinese
export-oriented enterprises, by suppressing Chinese exports, while the dollar’s decline
in value will cause a rise in commodity prices and will have a certain impact on imports.
China has a high degree of dependence on imports and exports, economic growth will
certainly be affected, according to the General Administration of Customs data, in 2011
China’s degree of import and export of foreign trade dependence is 50.1%, of which
export dependence is 26.1%, and the import dependence is 24%. Research into the trend
of China’s dependence on foreign trade, in Figure 4-4, shows that total import and
export volume over the past ten years has grown consistently, except for a pause in 2009
that was affected by the global economic crisis and weakened external demand. The
current ratio of exports to GDP is 50.1%, which indicates a decisive role in Chinese
visible trade status in economic activities. In addition, the main export objective of
China is Europe and the United States. Europe and other developed countries are now
experiencing slow economic recovery, the future economy will face the continued low
growth. Besides Europe mired in debt and America will continue to face pressure to
reduce fiscal deficits. This will inevitably lead to the weak Chinese external demand,
and then slow industrial production growth, putting pressure on Chinese enterprises in
the current passive transformation. China’s economic transformation has not yet been
successfully transacted, which will cause the slower economic growth, and bring a
series of problems in business failures and rising unemployment.

![Graph showing export and import scale and the ratio of GDP from 2001 to 2013](image)

**Fig. 4-4 2001-2013 Import and export scale and the ratio of GDP**

*Source: Customs head office & State Administration of Foreign Exchange*

2. From the perspective of financial stability.

The depreciation of the dollar caused by loose monetary policy will increase dollar liquidity, once the economy improves it will accelerate into fast growing profits, push up inflation, create asset bubbles, and disturb the stable operation of the Chinese financial system, which will affect financial stability and impact the normal operation of the Chinese economy. At the same time, in order to suppress the growing influence of China and the RMB, future bilateral economic and trade frictions will become more and more frequent. America will try various devices to limit Chinese products, such as anti-dumping tariffs, and affect the normal operation and development of the Chinese economy. On the other side, America will continue to exert pressure on the appreciation of the Renminbi, weak dollar, to resolve the huge trade deficit, creating the risk of instability in the Chinese economic and financial system.
3. From the perspective of debt of local government in China.

Foreign trade growth and the adjustment of China's own economic structure will lead to China's economic growth slowing, and the government's political GDP considerations will have to increase fiscal stimulus efforts. At the same time, Euro and American loose monetary policy will lead to the rise of "hot money", pushing up prices of assets such as real estate, and can also increase financial interest of the local government to acquire land, which may lead to social conflicts. At present, the scale of local government debt has caused some concerns. If local governments expand investments, the scale of debt is likely to continue to expand and it will lead to a repeat the European debt crisis. Especially, if local governments debt crisis erupted then the bank's non-performing loan ratio will rise sharply, because according to CBRC Chairman Liu Mingkang, China's local government debt represents nearly 80% of all bank loans. Once China experiences a banking crisis, it may cause instability in the whole financial system, consequences which will be unbearable to contemplate.

Debt reduction by American government will cause the inflation crisis in China and these negative effects will have a high probability to harm the financial system.

4.5 Influence on Monetary policy

American debt reduction measures have an indirect effect by reducing the independence and flexibility of Chinese monetary policy. Low interest rates and loose monetary policy in the U.S. will aggravate the situation of global excess liquidity, so that China's future is facing a great impact from the flow of "hot money" and inflation.
pressure. The RMB will be forced to rise, China will be forced to adjust monetary policy to accommodate the rise, interest rates and other monetary instruments will be used more cautiously, affecting the independence and flexibility of China’s central bank monetary policy.

At present, the Chinese economy slowed due to the global economic downturn and the active adjustments of the economic structure, such as price controls made to reduce inflation pressures. Weakening of external demand and need for central banks to adopt a relatively loose monetary policy to stimulate the economy limits the flexibility of central bank policy. With the implementation of global loose monetary policies, future "hot money" will flow back into China, push up asset prices and inflation pressures. The future inflow of "hot money" would continue the growth of Chinese foreign exchange reserves, which will cause the Chinese central bank to issue the corresponding value of RMB. The process of increasing foreign exchange reserves is the central bank base money supply. Increase the foreign exchange is passive because it will cause inflationary pressures, and the impact of inflation on China has been described above, its harm is remarkable. This requires the central bank to tighten monetary policy to reduce domestic liquidity and ease inflationary pressures. But now the situation is clearly not suitable for a tight domestic monetary policy if the economy does not restore the previous vitality. If future inflation pressure requires the central bank to tighten monetary, these austerity measures are to raise interest rates, increase the deposit reserve rate, issue central bank bills, and stronger administrative guidance. But the central bank cannot solely raise interest rates because higher interest rates will only
increase spreads between China and developed countries, evoking international speculative capital for RMB arbitrage. It will stimulate the acceleration of “hot money” inflows, which will lead to RMB investment volume increase, and policy objectives that conflict. Thus, the best central bank tightening measures are not obvious. At the same time, the increase in interest rates will increase the burden on enterprises, lower corporate profits, reduce the enthusiasm of production, and affect the development of Chinese economy.

Therefore, the central bank will be more dependent on the issuing bonds and raising the deposit reserve measures, which not only increase the sterilization cost of the central bank, but also raise the reserve ratio. Because the multiplier effect of deposit reserves is huge, this will affect the whole national bank system, induce a bank credit crunch and impact the Chinese economy. Raising the deposit reserve ratio will result in the following problems: (1) The deposit reserve rate increase is equivalent to a disguised tax levy on banks; (2) a deposit reserve rate increase is essentially credit rationing. Normally, the central bank makes it easy for enterprises, government institutions, and monopoly industries to raise capital, credit rationing will not be conducive to the adjustment of the economic structure and will affect the equilibrium development of China’s economy; (3) The lack of funds cannot accommodate the social production and the demand for funds and will easily lead to financial disintermediation, this will catalyze the birth of shadow banks and folk credit will increase rapidly, especially small and medium enterprises unable to get the funds from the Bank will be involved and make further supervision difficult.
This puts the central bank into a dilemma when making choices of monetary policy. Raising interest rates, issuing bonds or raising the deposit reserve rate will have a negative impact on the original goals. The central bank needs to balance between the benefits and costs of various measures to formulate appropriate policies. The central bank’s monetary policy independence and flexibility will be seriously affected, the effectiveness of monetary policy transmission channels will be greatly reduced, and thereby making the central bank guided Chinese production and consumption by monetary policy uneven. The result will affect the development of Chinese economy.

In the current international complex environment and domestic economic situation, the independence and effectiveness of monetary policy of the central bank is to ensure that the Chinese ride out the economic storm and growth. A rapid response is required and corresponding policies to avoid serious damages for the smooth operation of China’s economy.

4.6 Influence on Chinese policy option

American debt reduction measures bring third indirect effect that is to restrict China’s policy choices. China now is facing such a problem. As the biggest creditor of America, U.S. policy choices will inevitably have a far-reaching impact for China. China is now the world’s second largest economy, leading the world economic growth in foreign exchange reserves, in many ways, even competing with America. Foreign media group China and America together called G2, which is enough to highlight the importance of global China. But China has always been a follower in the global
economic and financial system, not qualified to make the rules of the market. In many respects, China will still be restricted by the developed countries such as Europe, among which American led. One simple example is two years ago America continued to maintain low interest rates, and China, to prevent “hot money” impact, could not raise interest rates to quell inflation, but had to go through the continuous increase in the deposit reserve ratio to cope.

The international relationship between the two countries is the most important, and the most complex bilateral relationships, great difference of bilateral political and economic system has led to many economic frictions, and the trust between both is not enough. U.S. has indicated that China is a currency manipulator, that the Yuan is undervalued. The U.S. also accuses China for trade protectionism, and imposes high anti-dumping taxes on Chinese commodities and provide market entry barriers. These actions damage relations between the two countries, affecting the normal operation of the economy. But because of its huge foreign exchange reserves holding, and because of the America economic dependence, China is situated at a very passive position. With America issuing dollars as the world currency with high liquidity, China was forced to raise the reserve, issuing central bank bills to hedge to absorb the liquidity and bring the super currency in. U.S. depressed bond interest rates to help finance its fiscal deficit, and China had to continue buying low yielding treasury bonds from America; by using this measure, America can use the dollar’s value to help resolve the burden of deficit financing, and China will have to face the pressure of RMB appreciation in order to maintain the stability of exchange rate and inflation. On the other hand, in response to
WTO pressure on Chinese trade and economic activity, China only can fight back through litigation; the good is that China’s wins more often than it loses.

All in all, American monetary policy depresses the bonds yield while China keeps acquiring American bonds which challenges the independent policy making by China.

Chapter 5 Countermeasures of China

5.1 Adjust Economic Structure and Change the Mode of Economic Development

An important reason that China holds a huge amount of American bonds is because China is fast growing and accumulating huge foreign exchange reserves, which has a direct relation with the Chinese export-oriented economy. China has a surplus in the current account and the capital account, as a result of the large inflow of foreign exchange and accumulation of foreign exchange reserves. Therefore, China should make an adjustment of its economic structure and promote the transformation of the economic growth mode. This transformation not only can help to suppress the growth of foreign exchange reserves, but also can reduce import demand and reverse the current passiveness.

First, China needs to expand domestic demand, fully tap the huge potential for domestic consumption, especially the need to exploit potential consumption in rural and suburban areas. Measures that China could to improve are: pay more attention to protect the rights and interests of workers, increase the income of the workers, reform
the unreasonable tax system, reform of medical insurance system, improve the social security system, break up monopolies, create a fair competitive market environment. If people have money to spend, the economic growth mode can be transferred from an exporting-oriented to a mode that includes consumption, investment, and export.

Second, China should reduce the trade surplus and actively increase imports while stabilizing exports. This action will play an important role in adjusting economic structure and promoting macroeconomic equilibrium. Since China joined in WTO, comparative advantage determines the Chinese role in the world economy, most countries started to invest in China, and China becomes the manufacturing country. The huge trade surplus is caused by this commerce growth mode that is importing materials and exporting after manufacturing later. Therefore, China need to further strengthen imports in the future, that is to encourage and support enterprises to import foreign exchange reserves of strategic materials, in order to maintain import and export balance, inhibit the rapid growth in foreign exchange reserves, and promote Chinese economic balance.

Third, promote the capital account balance. China should strengthen the management of capital inflows and improve the quality of the actual utilization of foreign capital. Also it should guide the direction of the actual needs of industry investment in China in order to avoid arbitrage money fleeing. More importantly, China needs active stabilization of an extension of the capital outflow channels to promote capital account balance. Therefore, China needs to increase foreign investment and the effective use of foreign investment, especially foreign private investment, promoting
the economic balance of its capital and financial accounts.

5.2 Strengthen Degrees of Freedom of Enterprise Holding Foreign Exchange and Encourage Foreign Investment

China foreign exchange reserves are concentrated in the central government and the limited staff to manage such huge reserves will cause huge stress on management. At the same time, because foreign exchange reserve management concerns the safety of the investment, only a few companies are able to share the CIC investment pressure, and the effect is not ideal.

Therefore, China needs to decentralize the management of foreign exchange reserves to households and businesses, and the civilian implementation of foreign exchange reserves. But for now, it is not sufficient to only realize this point, government needs to release control step by step. Therefore, China needs to increase the opportunities for individuals and businesses and expand dominance of enterprises to the foreign exchange area. Deregulate on investment by foreign companies, and make those investments become the main foreign investment of the country. The transformation of future management of foreign exchange reserve investments to civilian control can release the stress of foreign exchange reserve investment management and also achieve the targets of foreign investment reserves investment.

Government needs to allow enterprises to have direct investment overseas. Mergers will allow companies to receive bonds, stocks and other financial products. Companies can use them to provide foreign exchange loans to international companies.
and encourage companies to continue to expand their overseas direct investments. The deregulation will encourage domestic enterprises to go abroad, especially private enterprise like Huawei company, and obtain certain technology and management experience and provide loans to foreign companies. This tactic will import equipment, bring in the elites, and inspire other private companies to investment overseas.

At the same time, China should formulate policies and measures to help foreign enterprises to invest in China. Presently China cannot meet international standards to attract foreign large-cap companies. Most domestic enterprises do not have the ability to invest in the global scope, have a shortage of funds, do not understand the rules of the market, and culture conflicts often become barriers to the foreign investment. China should expand funding support to the overseas projects and create favorable conditions between enterprises and financial institutions. Expand financing channels and means will help enterprises to understand the international market rules and adapt to foreign investment culture. Lastly, the government should try to negotiate with foreign governments to sign protection of investment agreements to create a good environment for enterprises, which will eliminate local protectionism and protect the rights and interests of the enterprises in the overseas investment.

5.3 Diversified Asset Structure of Foreign Exchange Reserves

To reasonably control the excessive growth of foreign exchange reserves, consideration should be given to the implementation of diversification management of foreign currency reserve assets to resolve risks associated with asset concentration.
Asset diversification can start from the following three aspects.

1. Dollar assets diversification, internal structure

Chinese holdings are more than 90% invested in US dollar assets, and almost all are long-term bonds; therefore, diversification of these assets is the first step.

First, reduce exposure to long-term treasury bonds. In the long run, because of the existence of the depreciation of the dollar and American inflation trends, it should be appropriate for China to reduce the holding of both America long-term Treasuries and short-term debt, in order to achieve investment diversification. At the same time, reinvestment of maturing bonds will also to reduce the long-term treasury bonds investment, and strengthen the short-term bond configuration. This will improve liquidity and reduce interest rate risk, because America cannot always maintain zero interest rates or keep raising interest rates. The prices of short-duration bonds are affected less by rising interest rates than the prices of long duration bonds since duration theoretically indicates the risk. Even though the changes in the exchange rate and interest rates will affect bond prices, the choice of holding short-duration Treasuries will have a smaller effect.

Second, increase investment in the Treasury inflation protected securities (TIPS) in order to prevent America from using inflation to reduce its debt burden. TIPS value is linked to the consumer price index (CPI). America started issuing TIPS in 1997, and the total amount issued so far is less than 10% of all American debts. Increased Chinese holdings of TIPS may require that America further increase the circulation of TIPS. With TIPS, higher inflation leads to higher interest expenses for the U.S., which could
lead to the redemption of TIPS. So the increase of TIPS circulation by the U.S. is conducive to curb its fiscal deficit, and prevent the U.S. from deliberately pushing up inflation to reduce its debt burden.

Third, hold higher levels of corporate bonds and stocks. In addition to the investment outside of American bonds, investment in other various products can be appropriate to increase China’s credit rating. Since different types of bonds means that different levels of risk and return, the rational allocation of the bond portfolio can disperse risk effectively, and improve income. At the same time, portfolio diversification blue chip stocks can be an appropriate way to increase performance. China’s holdings of U.S. equity now account for 9.21% of all assets, while the world’s average level is 20%-30%. China has room for higher allocations of equity, and should increase investment in equities as conditions permit.

2. The diversification of financial assets

The diversification of foreign exchange reserves should include holding in various currencies. To realize the diversification of its investment structure, China should include different currencies when it rebalances the configuration. China can try to include special drawing rights (SDR) to arrange the appropriate currency structure after rebalancing its portfolio. The SDR will likely have a continued importance in the future global financial system. Many scholars even conceive that the SDR could act as the world currency. Perhaps not completely in accordance with the SDR structure, China could use this structure as a reference to allocate its foreign exchange reserve assets. At present, SDR is composed of four currencies, the dollar accounts for 44%, 34% Euros,
yen and Sterling each accounted for 11%, the exchange rate valuation is the four currencies exchange rate weighted average. This suggests that China should reduce its dollar holdings and increase the holdings of other currencies to approximate the SDR percentages. Although, China may want to consider current economic developments when deciding on these allocations. For example, in the euro debt crisis, allocations should factor in the economic conditions in Germany and other European countries, and may consider buying German bonds and stocks.

In addition to the developed countries, at the same time we cannot ignore developing countries and international organizations. China could consider investing in small range of the BRICs in other countries, but also can invest in the International Monetary Fund and other super sovereign organizations, which not only can reduce the investment risk, increase revenue, but also can improve Chinese influence in the international community.

3. The holdings of non financial assets

Diversification of foreign exchange reserves should not only consider the diversification of financial assets, but more consideration should be given to non-gold assets. China should consider holdings of gold and oil and natural gas and other strategic assets. Many scholars think that currently the gold and crude oil markets do not contain such large foreign exchange reserves. The diversification of foreign exchange reserves is a trend, and not just because of potential losses associated with holdings of U. S. Treasury securities as the U.S. continues with loose monetary policy and a weakening dollar. China could suffer losses on these non-financial assets too.
Even if there will be some losses, diversification may be useful for the development of the Chinese economy. China should increase holdings of non-financial assets, but it needs careful selection at the time of purchase.

In order to avoid the market impact of buying a large amount of assets, China could strengthen ties with other countries through loans and agreements for direct purchase of oil, natural gas and other sources of energy. As an example, in 2009 China signed agreements with Russia, Venezuela, and Brazil, for the purchase of oil. China could also strengthen its energy, metal and other strategic resources reserves through equity participation or mergers with foreign resources companies. This would realize real asset holdings, promote diversification of foreign exchange reserves, and effectively alleviate the energy and resource bottlenecks constraining economic development in China.

China should also consider using reserves to import from Europe and the United States and other developed countries technology and equipment. Indeed, Europe and other developed countries implement more barriers to market entry on Chinese goods, and many high-tech Chinese products and are difficult to export. But China can use its huge holdings of America bonds and support for Europe as a bargaining chip, demand that Europe and the U.S. ease Chinese market restrictions. At the same time, China now lacks good medical equipment, education facilities, and equipment and materials. They can use excess foreign exchange reserves to buy domestic health, education and other industries from foreign companies. This will not only benefit the Chinese people, but also can enhance the independent research and development capacity, and improve the
5.4 Improve the RMB Exchange Rate Formation Mechanism

At present, the RMB exchange rate formation mechanism is not perfect, the management of floating exchange rate is still relatively strict. With inflows of foreign exchange, the central bank maintains the stability of the RMB exchange rate, which leads to the massive expansion of its balance sheet, passive monetary expansion. By the end of 2011, China's M2 balance reached $852 billion Yuan (RMB), the M2/GDP indicator to measure a country's economic monetization rate reached 189%, almost two or three times most developed countries. So high M2 and economic monetization rate will cause serious interference to Chinese prices, and the central bank's asset scale expansion will also bring a huge financial burden. According to the "First Financial Daily" estimates, from 2003 to 2010 the central bank's cost to hedge foreign exchange risk totaled more than 1 trillion Yuan. As a result, China needs to speed up and improve the RMB exchange rate formation mechanism, advance the reform of exchange market, play a more active role in the market, gradually expand the bilateral floating range of RMB exchange rate, and strengthen the flexibility of the exchange rate, which will also help to promote the transformation of the mode of economic growth and structure of the country.

The correctness of this approach is illustrated by the central bank's latest announcement, that since April 16, 2012, the inter-bank spot foreign exchange market trading price of the US dollar against the RMB floating rate ranged from 5/1000 to one
percent, which is traded daily in the inter-bank spot foreign exchange market. The Yuan against the dollar trading range could be announced in the China Foreign Exchange Trade center, the RMB - dollar trading range within a range of one percent to expand under a floating fluctuation margin of exchange rate is to improve the exchange rate formation mechanism.

China can also through the following measures gradually improve the RMB exchange rate formation mechanism.

First, to further relax market access conditions, so that more financial institutions and enterprises can participate, thus increasing the principal transactions in foreign exchange market. The central bank itself should gradually withdraw from the trading of foreign exchange in the market to form a more true market for trading of foreign exchange.

Second, vigorously promote the development of the foreign exchange market. Provide innovative products, increase the transaction currency exchange market, open more foreign currency trading, perfect forward, foreign exchange swap transaction management, development of a RMB foreign exchange derivatives market, establish optional tools to avoid exchange rate risk, which would help import and export enterprises.

Third, strengthen enterprise education and guidance, and guide enterprises to strengthen their own operational mechanisms. At the same time, China should actively create conditions that improve the enterprise access to the exchange markets.

Fourth, reduce the central bank intervention in the exchange rate of RMB and
exchange rate changes, allowing free market supply and demand of the floating rate. At the same time, in order to prevent excess RMB exchange rate fluctuations, the central bank should improve the exchange rate adjustment mechanism, regulate the means of the adjustment of interest rates through open market operations, set up an exchange stabilization fund to direct regulation and control in the foreign exchange market, and maintain the stability of the RMB exchange rate.

Fifth, strengthen the monitoring of abnormal transactions. In the process, improve the RMB exchange rate formation mechanism, China needs to strengthen the monitoring of the abnormal trading in foreign exchange and the economic impact of “hot money” flows on exchange rates. China also needs to monitor the inflow of “hot money”: tracking and investigation of abnormal foreign exchange inflow and outflow, and preventing large one-off outflows. At the same time, China should increase the cost of import “hot money”, such as considering the necessary of a Tobin tax that is a tax on all spot conversions of one currency into another. In this case, a tax on the exchange between U.S dollars and RMB. Once China truly established flexible RMB exchange rate formation mechanism, reflecting the market supply and demand, it can not only solve the unilateral appreciation problem, the “hot money” problem, and also effectively alleviate the pressure of the growth of foreign exchange reserves, but also break the links between the base currency and foreign exchange under the current exchange rate system.
5.5 Promote the Reform of the International Monetary System and Speed up The Internationalization of RMB

The final countermeasure is to promote the reform of the international monetary system and speed up the internationalization of the Yuan. U.S. Treasuries play an indivisible role of in such progression. As long as the US dollar is the global reserve currency, then U.S. bonds will still have appeal to sovereign investors. Therefore, get rid of the dollar as the reserve currency in the international monetary system, by promoting a multi polarization monetary system should be the future direction of Chinese efforts. International currency diversification is the reform of the international monetary system that is the most feasible direction. If China wants to rid itself of the plight of dollars and Treasuries, it can proceed from the following three aspects in the future.

1. Support the dollar in a short term and maintain China’s asset security

In the present circumstances, China has not slashed its the holding of American debt. This is because: one reason is China’s huge holdings of US debt, the market watches all actions closely, and if China reduces its holdings substantially, it may trigger a Domino effect, and others will sell off US debt. American bond prices will drop, then China’s remaining American bonds will further depreciate; the second reason is a large-scale reduction of American bonds could be easily misunderstood as taking advantage of high prices, especially now American economy is slowly recovering. If China’s reduction caused market shocks, it could put the U.S. into recession again, and lead to an American counter “attack.” This is not the economic transition period China wants
to see. Therefore, the best way for China at present is the rapid growth of reserves in a controlled condition. China will hold American debt stable at the existing level, continue to invest in U.S. bonds that will support U.S. economic recovery, which will be conducive to the steady development of economic relations between the two countries. This will show the international community that China is a responsible country, and will help consolidate and enhance its favorable international status. The European debt crisis and slow global economic growth also provides favorable conditions for China. In the wake of the financial crisis, many funds flocked to U.S. Treasuries for hedging and safety considerations. This reduced the pressure on China to buy U.S. Treasuries, making it a good time scale down American bond holdings.

2. Support the euro to challenge the dollar

In order to realize the diversification of the international currency system, there must be a currency to challenge the dollar. The most likely currency is the euro. As seen in Table 5-1, the euro follows the dollar as a reserve currency, although there is a large gap between the two currencies, but the euro has rising momentum. European trade, economic, political, and military aspects are perhaps the only one that could compete with the American economy and influence. Therefore, the euro is the most likely currency to challenge the dollar. China should actively support the euro to challenge the hegemony of the dollar. Chin and Frankel (2007) have explored under what circumstances the euro could replace the dollar as the world currency. First, they think that two conditions in Europe are essential: (1) the UK and other countries in the euro zone that did not convert to the euro should do so to increase the scale of euro zone
economy relative to the American economy. This is particularly for Britain, because the British accession will greatly contribute to the establishment of the euro’s leadership; (2) the U.S. adopts macroeconomic policies that lead to further dollar depreciation and inflation, and finally leads to loss of confidence by investors. The first condition cannot be predicted so we can make nothing of it, but for the second condition, America is walking on this road now.

Table 5-1 Currency reserves in dollars (Billion)

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<tbody>
<tr>
<td>US</td>
<td>1261.271</td>
<td>1350.481</td>
<td>1423.527</td>
<td>1475.857</td>
<td>1582.018</td>
<td>1731.996</td>
<td>2003.918</td>
</tr>
<tr>
<td>Britain</td>
<td>49.831</td>
<td>64.719</td>
<td>76.021</td>
<td>58.055</td>
<td>67.739</td>
<td>58.152</td>
<td>76.555</td>
</tr>
<tr>
<td>France</td>
<td>76.263</td>
<td>84.197</td>
<td>85.215</td>
<td>83.545</td>
<td>94.922</td>
<td>120.550</td>
<td>132.081</td>
</tr>
<tr>
<td>Germany</td>
<td>597.858</td>
<td>440.455</td>
<td>522.190</td>
<td>511.245</td>
<td>616.432</td>
<td>648.720</td>
<td>672.444</td>
</tr>
</tbody>
</table>

Source: IMF

At present, the European sovereign debt crisis is Greece, Spain, and other heavily indebted countries on a fiscal austerity path. Recent estimates in the euro zone economy show a big improvement. The time is right for China to support Europe, but it must be careful to choose the best way. China should enhance the EU industrial investment, take the opportunity to purchase high-quality enterprises; expand trade with the EU, with
trade and investment boost the euro zone countries and investor confidence in the euro; participate in solving the European debt problems, improve Chinese influence in Europe, and support the development of the euro. In Europe after the economy recovers, more effort to strengthen ties with Europe, which can reduce dependence on American the economy, but also can promote the transformation of China's economy. Finally, support the euro challenge to the dollar, thereby promoting the international monetary system to diversify the direction of development.

3. Promote the internationalization of RMB

Steadily promoting the internationalization of the RMB will help make the Yuan a suitable international reserve currency. One way is to get rid of a dollar of America's debt, but also to promote the diversification of the international monetary system. Once the RMB is an international currency, it will reduce China's demand for reserves. This will reduce foreign exchange speculating, and the accumulation of excessive pressure associated with large dollar reserves. China's route to the internationalization of RMB is basically clear, namely two "three steps." First in the surrounding region, then regionally, finally internationalization. For the currency function, first settlement currency, then investment money, finally the reserve currency. Through these two "three steps" the Yuan could become an International currency. In the surrounding region China has done well, in the Southeast Asian market the RMB is wildly called "small dollar." As a settlement currency, China at present has introduced various measures to promote the Yuan as a settlement currency, such as the nationwide RMB cross-border trade settlement, promote the Hong Kong international financial center construction
etc. At present, the need to speed up the internationalization of RMB should keep a macro prudential principal pace. Europe’s economic downturn and the RMB monetary credibility also brings opportunity for China.

But to truly realize the internationalization of the RMB, China still faces many problems that need to be overcome. One is the market, the exchange rate is free floating, two is the opening of the capital account, free exchange, and the third one is fully opening the capital market, especially the free and fair competition in the domestic financial market. If there is no hierarchy, large-scale open market and the financial system, if there is no liquidity, profitability and safety of financial products, the internationalization of the RMB is not possible.

Therefore, in order to promote the internationalization of RMB, China should guarantee active, gradual, controllable conditions, gradually perfect China's capital market, interest rate and exchange rate market pricing mechanism, accelerate the construction of Hong Kong international financial center, promote the construction of offshore RMB center, issue Yuan denominated sovereign debt in the overseas, actively participate with all the countries in the world in currency swaps, further promote the RMB settlement of international trade, realize the opening of capital account, finally realize the internationalization of the RMB.
6 Conclusion

6.1 Major Findings

Major findings of this study are as follows:

First, current published related research and analysis about China’s U.S. debt holdings is mostly confined to the foreign exchange reserve level, rather than from a more macroscopic angle. In fact, because China buys huge amounts of American debt, the effect is not only reflected at the level of foreign exchange reserves, but also relates to the economic and financial aspects of Chinese life, and even spills over into the political arena.

Second, analysis of the measures of debt sustainability, such as ratios of debt to GDP, suggest that the sustainability of American debt is of concern given the rapid increase in debt following the financial crisis. Since China is America’s largest creditor, the sustainability of American debt should concern China.

Third, America’s public debt policy affects China’s economic and financial systems, including foreign exchange reserves, exchange rates, inflation, monetary policy, economic operation, and policy choices. The analysis of the impact of US debt policy shows that it is not limited to foreign reserves, but impacts various aspects of the current political and economic environment.

Fourth, to counter the impact of U.S. public debt brings to China, the following measures are analyzed: accelerating the transformation of the Chinese economic structure, adjusting the mode of economic development, encouraging foreign
investment, diversifying the asset structure of foreign exchange reserves, improving the RMB exchange rate formation mechanism, promoting the reform of the international monetary system, speeding up the internationalization of the RMB, and enhancing China's influence in the global economy.

6.2 Limitations

The shortcomings of the analysis lies in measuring the sustainability of American public debt because sustainability is not only affected by easily measured factors such as the rate of economic growth and interest rates, but sustainability also depends on hard to quantify political and military factors. As a result, any model used to analyze the sustainability of American public debt will have weak explanatory power, and provide limited usefulness to guide policy.
Reference


Carmen M. Reinhart and Kenneth Rogoff. 2009, This Time is Different: Eight Centuries of Financial Folly, Princeton University Press.


