RESEARCH ON RISK OF FISCAL DEFICITS

财政赤字风险研究

LUO ZHE

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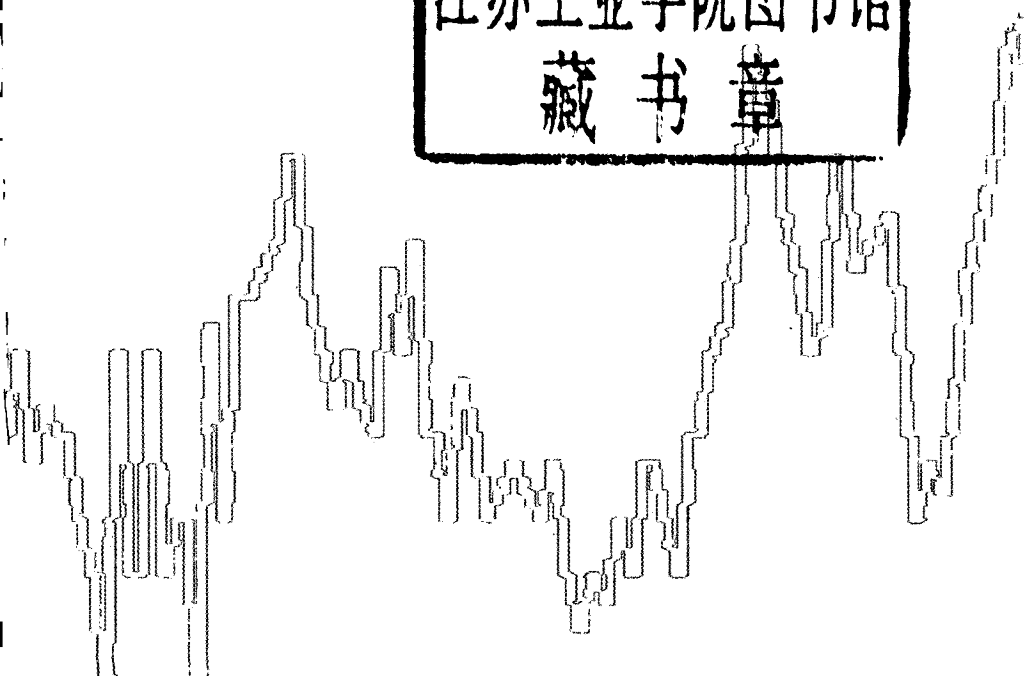

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Preface

Fiscal risk is one of the important problems in fiscal fields and the forefront in the research of public finance. The key issue of fiscal risk is the risk of fiscal deficits. The fiscal deficit reflects not only the balance between the fiscal revenue and expenditure, but also various contradictions in Micro economy. The risk caused by fiscal deficits affects every aspect of the economy, and produces profound influences on economy growth, full employment, price stability, the balance of payment, political stability and so on.

On the basis of comprehensive analysis of internal and external information and data, the research system of the fiscal deficit risk is set up in this book. First of all, the content, the performance and the characteristics of the fiscal deficit risk are defined in part I. Meanwhile, the relationships among fiscal variables and all kinds of impacts of fiscal deficit risk are analyzed. Moreover, it is pointed out that only when the net income of deficit risk in a particular period exceeds zero can the government adopt the fiscal deficit policy. China's deficit risk is discussed in part Ⅱ. It is pointed out that the deficit risk mainly comes from implicit liabilities and contingent liabilities. The cause, representation and influence of China's fiscal risk are analyzed respectively. In this part, some acute problems in China, such as the financial ethics, the fiscal vulnerability, are also debated. In part III, the deficit risk management system is set up, in which some effective means for warning, assessing and controlling the deficit risk are provided. China's deficit risk indexes, deficit scale, and other related data are also examined.

In general, the author tries to achieve the following theoretical breakthroughs: (1) Drawing the outline of formation mechanism of deficit risk; (2) Revising the definition of fiscal deficit structure; (3) Analyzing the lack of financial ethics in China; (4) Trying to use the profit and loss research method in the analysis of risk influence; (5) Analyzing the influence of fiscal vulnerability on deficit risk.

Even when only one name is listed on the cover, no author works alone. I am grateful to my colleagues, including Duan Haiying and Jia Aiyuan. I appreciate the shared learning experience with many postgraduate students over the years, especially Wang Jianchao, Sun Fei, Wei Xingmei ,Yi Yanling, Wen Zhu, and Li Jia.

Contents

PART I

GENERAL INVESTIGATION ON THE RISK OF FISCAL DEFICIT

The fiscal deficit risk is the possibility of financial losing of the national economy and social welfare resulted from the scale and structure of the fiscal deficit and from the methods to make up. In this part, the classification of fiscal deficit, the deficit structure, the definition of fiscal deficit risk, and the connection between fiscal deficit risk and other related risks are analyzed respectively. The manifestation of fiscal deficit risk, the risk formation mechanism and the influence of the risk are analyzed afterwards in this part.

Chapter 1

Fiscal Deficit and Fiscal Deficit Risk

Some definitions of the risk of fiscal deficit should be offered in this chapter. To begin with, a comparative analysis between fiscal deficit risk and other related risks will be carried out.

1.1 The Definition and Structure of Fiscal Deficit

1.1.1 The Definition of Fiscal Deficit

Fiscal deficit during a period is the excess of public finance expenditure over revenues. It locates the interface between Real Economy and Monetary Economy. On the one hand, it reflects the important contact of the product and the income circulation; on the other hand, it determines the obligation level of the public sectors, which influences the society's total supply and the money flows. As one of the important indicators of the macroeconomy, the fiscal deficit is both the result of the expansionary fiscal policy and the important basis for decision-making of fiscal policy.

The concepts related to the fiscal deficit include the budget deficit, the final accounts deficit and the deficit finance. The budget deficit means the excess of government expenditure over revenues which appears in a government budget. The final accounts deficit means the excess of actual government expenditure over actual revenues after the budget is carried out. The budget deficit and the final accounts deficit generally refer to fiscal deficit. The deficit finance is a kind of expansionary fiscal policy which means the practice of deliberately allowing government spending to exceed its revenues in order to boost economic activity and to reduce lower unemployment:

1.1.2 Classification of Fiscal Deficit

When talking about deficit, people often pay close attention to the total value of the fiscal deficit and debt level, and judge the macro-economy trend based on this. In fact, the fiscal deficit has a key issue, i.e. the fiscal deficit structure. Different deficit structure will bring about different forming reasons of fiscal deficit risk, different evolving trends of risk, and different impacts on government fiscal policy decisions. Thus, before we analyze the risk of the fiscal deficit, we should identify the classification of fiscal deficit.

(1) Hard Deficit and Soft Deficit

Government's budget revenue and expenditure differ in their broad and narrow senses. The broad-defined budget revenue and expenditure are under the condition that debt revenue and expenditure are normal financial revenue and expenditure. So budgetary revenue includes all receipts or incomes of the government (tax income, non-tax income, property income and bonds income). Accordingly, the budget expenditure is an expenditure which includes the debt expenditure. The deficit calculated according to this statistics caliber is known as "the hard deficit." Our country took this kind of method to calculate the balance of public finance from 1953 to 1993. In this way, even if the regular fiscal expenditure was greater than the regular fiscal income, the contrast of revenue and expenditure in the broad sense may be shown as equilibrium or surplus. Since the state information of the fiscal revenue and expenditure was distorted, the macroeconomic regulation direction and intensity were misled. And as for the understanding deficiencies to finance difficulty, it was hard to analyze the impact of fiscal expenditure and revenue on economic operation.

The narrowly-defined budget deficit is called "the soft deficit," which does not include debt revenue and expenditure. While the debt income is not listed in the fiscal revenue, the principal of government debt is not listed either, except the debt interest. This kind of method is adopted by many countries in the world. According to this kind of computing technology, if the deficit appears in public finance, it indicates that the expenditure exceeds the normal income (the income excluding borrowing money), and it may increase the total social demand. As to this deficit, the government generally issues national debt to make it up. The advantage of this kind of computing technology is that it reflects the state of fiscal revenue and expenditure in truth, and it is favorable to monitor and control the debt accurately, and to analyze the impact of fiscal expenditure on economical operation accurately.

Since 1994, the debt revenue and expenditure haven't been listed in China's budget revenue and expenditure but the debt interest expense has been excluded from government expenditure which disobeys the international custom. Since 2000, our country's debt interest expense starts to be listed in current expenditure, which means the method of budgeting is integrated with world custom.

(2) Full-employment Deficit and Cyclical Deficit

The economic fluctuation is relevant to deficit size. The imbalance budget may be the cause of economic fluctuation and the result of the economic fluctuation as well, which makes it hard to distinguish the real reason of imbalanced public finance. For example, the fragile fiscal state may be concealed by strong economy; on the contrary, the deficit may be exaggerated because of the economic depression and the stabilizer function. In order to reduce the influence of economic fluctuation, we must discover the essence of the fiscal equilibrium. Therefore, we need to distinguish "full-employment deficit" with "cyclical deficit."

"Full-employment deficit" is the budget deficit that would exist if an economy attained full employment with higher tax revenues and lower spending on public assistance. Full-employment deficit is also called "structural deficit," "cyclically-adjusted deficit," or "standardized-employment deficit."

"Cyclical deficit" is the federal budget deficit that results from cyclical factors rather than underlying fiscal policy. This cyclical component reflects the way in which the deficit automatically increases or decreases during economic booms or recessions. To clarify this definition, we would further analyze as follows:

When the economy is in a recession:

① Tax revenues are less than they would be at potential GDP. (The level of GDP that corresponds to the unemployment rate's is equal to the NAIRU[1].)

[1] The natural rate of unemployment is also referred to as the NAIRU—Non-Accelerating Inflation Rate of Unemployment. This is because the natural rate is supposedly the equilibrium rate of unemployment at which inflation will remain constant, neither accelerating nor decelerating.

② Transfer payments are higher than they would be at potential GDP.

We call those cyclical effects on taxes and spending "AUTOMATIC STABILIZERS" because they help to stabilize the economy, and to keep the unemployment rate closer to the NAIRU. When the economy expands, those two effects mean an automatic tax increase and automatic spending cuts, making it a bit harder for the economy to overheat (i.e., unemployment drops below the NAIRU, which would accelerate inflation). In a recession, those two effects keep the consumption of the unemployed from a massive fall and provide a sort of aggregate tax cut, thereby helping to prevent the recession from a depression.

Generally, the cyclical deficit means the actual budget deficit exceeds the full-employment deficit. When there is a deficit, some of it may be cyclical. (It exists because the economy is in a recession.) Usually, most of the deficit is structural (It would exist even if output gap were zero.)

Full-employment deficit is one of the most important concepts in macroeconomics. This concept firstly evolved from the middle period of 1940s, and was adopted by American Council of Economic Advisers in 1962. It has been developed constantly afterwards. In Europe, U.S.A., the deficit of full employment is an important tool to analyze the fiscal policy. When economy is in the potential GDP state and the rate of unemployment equals to non-accelerating inflation rate (NAIRU), the cyclical deficit is zero. Then the actual deficit is equal to full-employment deficit. (It is usually assumed that the full employment means the unemployment rate lasts from 5.0% to 5.5% in U.S.A.)

As it is mentioned before, the full-employment deficit is the actual budget deficit that exceeds the cyclical deficit. We will get an expression as follows:[1]

$$BD^*=tY^*-G-TR \qquad (1.1)$$

Where BD^* is full-employment deficit, Y^* income level of full employment, t the integrate tax rate, G government purchase expenditure, and TR transfer payment.

From the relation between deficit and economic variable, we can find

[1] 多恩布什，费希尔. 宏观经济学. 北京：中国人民大学出版社，1997: 66.

that the full-employment deficit regards deficit as external variable. The cyclical deficit regards deficit as the endogenous variable, which changes with the fluctuation of business cycle. The difference is shown in Figure 1-1.

In Figure 1-1, the axis of ordinates represents monetary volume, the cross axis represents national income level, MM' and LL' respectively represents the public expenditure level, and the line of TT' represents total value of tax revenue. TT' is a straight line sloping to the upper right corner, indicating the tax revenue is a function of the national income. When the national income is Y_1, the public expenditure is OM, which will be equal to tax revenue. The budget is in equalization at Y_1. If we assume the national income is Ye, and the public expenditure is OM, there will be a full-employment surplus of BC. As the public expenditure rises to OL, if economy is still in the full employment state, the original budget surplus is changed into the budget deficit AB, which is a full-employment deficit.[1]

When Y_2 is the real national income level and government's expenditure is OL, then the real budget deficit will be HD. Because of AB = DG, the cyclical deficit is HD − DG = HG, which means the real budget deficit exceeds full-employment deficit.

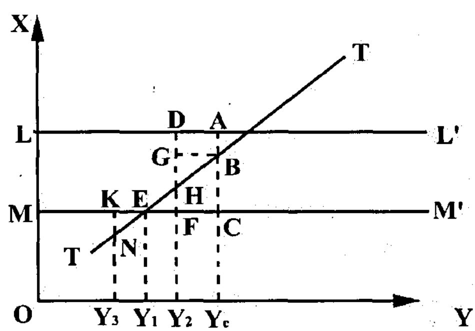

Figure 1-1 Cyclical Deficit and Full-employment Deficit

From this figure, we can also find the influence of economic recession and expansionary fiscal policy on budget deficit. If we assume national

[1] 魏杰，于同申. 现代财政制度通论. 北京：高等教育出版社, 1998: 364.

income level is Y_1, fiscal income and expenditure will come to balance. As other conditions do not change, the public expenditure rises from OM to OL, meanwhile, the national income rises from Y_1 to Y_2. Because the increase of the tax revenue is smaller than that of the public expenditure, the fiscal deficit HD appears, this kind of deficit is mainly caused by government's implementing of expansionary fiscal policy. If the public expenditure is still at OM, the tax rate does not change and economic recession appears. At this moment, social investment declines, national income level will thereupon drop from Y_1 to Y_3, which causes the tax revenue to reduce correspondingly. Then we will see the fiscal deficit KN caused by economic recession appear.

The economists attempt to distinguish cyclical deficit and full-employment deficit. They think that the government should not try to eliminate the cyclical deficit, because cyclical deficit can stabilize economy and even increase GDP. They suggest that the government should pay attention to reduce the full-employment deficit and make full-employment deficit zero in a long period. Once the government fails to correctly judge the full-employment deficit, the fiscal deficit might offer wrong signals about direction and intensity of fiscal policy.

(3) Public Sector Deficit, Real Deficit and Non-interest Deficit

It is pointed out in *The World Development Report* (1988) of the World Bank that the correct method to measure public department's deficit depends on the purpose of measuring. The purpose is to appraise the net money demand of public department, because this will influence inflation, domestic interest rate, investment, consumption, etc. The net money demand of public department reflects that the part of government's whole real expenditure exceeds whole real income, which is called the public sector deficit, or the total deficit. Under the precondition of higher inflation rate and stable nominal interest rate, the real interest rate of debts in public department drops. The real deficit (calculated by dividing the nominal deficit by the price level) corresponds to the change of the government's real obligations. It is necessary to subtract from the nominal deficit the effect of inflation on the real value of the government's obligations. So the real deficit = public sector deficit – the revised part of inflation. The non-interest deficit, which is also called the primary deficit, is created in certain budget period (year) and expresses growth of public debts due to government fiscal policy and (or) exogenous factors (except interest from the public debt).

Because total deficit = primary deficit + interest from the public debt, there is a dynamic relationship between non-interest deficit and total deficit. If the nation's budget has non-interest deficit, the government will issue debts in order to make up the deficit. While the debt increases, the size of interest must be expanded, and total budget deficit will rise constantly. The rising of total deficit will cause the enlargement of national debts and the further increasing of non-interest deficit, which causes economy to fall into the vicious circle. Therefore, when the government is facing the fact that the debt is too huge to be paid off, the future interest expense will be quite large. The government must rely on fast increasing economy to get non-interest surplus. It will be very dangerous when one country's economy grows slowly and when policy that results in constant debts has been implementing. If those situations occurred, the national debt would be unmanageably large.

The difference between non-interest deficit and total deficit strengthens the position of the national debt in the budget. It means that although the fiscal deficit could appear constantly and could be remedied with government bonds, the final primary budget surplus must reach a positive number to avoid government's debts expanding forever.

(4) Visible Deficit and Hidden Deficit

The visible deficit is the amount of which government spending exceeds government revenues announced by government's statistical data. The hidden deficit is the amount of which government implicit or contingent spending exceeds government implicit or contingent revenues. The hidden deficits are mainly caused by implicit liabilities and contingent liabilities. The former involve a moral obligation or expected responsibility of the government that is not established by law or contract; instead, it is based on public expectations, political pressures, and the overall role of the state as the society understands it. Examples of implicit liabilities are future public pension benefits that are not specified by law, disaster relief for uninsured victims, and default of a large bank on non-guaranteed obligations. Contingent liabilities are obligations triggered by a discrete event that may or may not occur. The probability of the contingency occurring and the magnitude of the government outlay required to settle the ensuing obligation are difficult to forecast. Probability and magnitude depend on some exogenous conditions, such as the occurrence of a particular event (for example, a natural disaster or banking crisis), some endogenous conditions, such as the design of government programs (for example, the contracts for state guarantees and insurance), as well as the quality and enforcement of regulations and supervision. Thus, a study of government fiscal position must also examine the obligations taken by the government outside the budgetary system. Governments that intend to avoid the danger of sudden fiscal instability and accomplish their long-term policy objectives must have a good understanding of both their direct and contingent liabilities and must be able to handle them appropriately.

(5) Revenue Type Deficit and Expenditure Type Deficit

We can distinguish two kinds of deficits with the two aspects of fiscal revenue and expenditure: one is called the revenue type deficit caused by the slower growth of revenue; the other is called expenditure type deficit caused by the faster growth of expenditure. Compared with the revenue type deficit, the expenditure type deficit is more difficult to control. Because the expenditure type deficit takes place under the condition that the expenditure increases faster than fiscal revenue, which will increase the fiscal risk and probably initiate new debts and contingent liabilities.[1]

1.1.3 Further Thinking of Fiscal Deficit Structure

As stated above, accompanied by the change of business cycle, the deficit caused by inherent stability function is considered as the cyclical deficit. After real deficit minus cyclical deficit, we get the full-employment deficit, which would exist if the economy was at "full employment" (i.e., if the unemployment rate were equal to the NAIRU). Full-employment deficit is also called structural deficit in some countries of European Union.

We think that this kind of classification about the fiscal deficit is not precise in economics. The structural deficit, according to its term, should be interpreted as the fiscal deficit caused by the change of economic structure. Once the structural deficit happens, it will not change with economic cycle.

[1] 陈共. 积极财政政策及其财政风险. 北京: 中国人民大学出版社, 2003: 335.