

China's fiscal risks and management: Experiences and trends

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Against the background of continued effects of financial crisis, fiscal risks management has become an important but tough issue for most countries in the world. Being a transitional country, China's fiscal risks have their own characteristics. The evolution of fiscal risks is accompanied with China's transitional reform and changes of governments' responsibility. The paper aims to track the changing pattern of fiscal risks from a historical perspective and summarizes the evolution of fiscal risks management. Then it further analyzes the challenges of managing fiscal risks, and concludes it with recommendations.

Keywords: fiscal risks, risk managements, fiscal risk matrix

Fiscal risk is an important but tough issue for most countries. In the past several decades, many economies have suffered from risk shocks, some of which even widely spread the whole globe and severely affected the world economy. Its destructive power on economy, sometimes extending to political and social fields compellingly reminded us the centrality of macroeconomic risks to governments' fiscal position and the importance of sound risk management (Petire, 2013). Contingent obligations created by nations' guarantees and thus fiscal opportunisms inspired are always seemed as the main sources of East Asian financial crises in 1998. Off-budget activities moved a large amount of government's obligations off budget control and hid fiscal risks that government really faced, which challenged the conventional analyzing framework for fiscal management (Brix and Schick, 2002). In 2008, subprime crisis aggravated the turbulence of global financial markets, and ended up with governments' bailout and nationalization in some countries. It is a typical example that debt risks from high leverages in private sectors finally turned into real burdens for governments, which makes the importance of thinking about new channels of fiscal risks against the background of economic integration. So the key points in strengthening risk management lie in comprehensive understanding the sources of fiscal risk, its potential channels and possible transformation mechanism.

Multi-sources of fiscal risks mostly result from dual-roles of governments playing in modern society, which leads to governments' responsibilities and obligations different from private sectors. On one hand, as a relatively independent economic and

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legal subject, most of public sectors have rights and also take obligations like private sectors, for example, signing contracts and complying with private laws. On the other hand, being public bodies, governments are entitled to levy taxes, make regulations, and take such public responsibilities as providing schooling, medical service, and public infrastructures, etc., which are mainly ruled by the constitutions, administrative laws and regulations (Liu, 2003). Furthermore, government is always deemed as the last resort to sustain the stability of economy and society by the public, so it should bear more obligations not just regulated by laws or contracts, but imposed by public expectations and interest groups' pressures. It means that governments' obligations and risks at different times are closely correlated with the changing roles played by governments in the economy and society.

Like other counties, understanding and identifying China's fiscal risks are a gradual process, along with the changing governments' roles and the increasing experiences in dealing with diversified risk resulting from abroad and home. Meanwhile, as a unitary country in the course of transition and urbanization, China also has shown its own characteristics in fiscal risks and risk managements.

The paper will just focus on fiscal risk analysis and management in China. It is organized as follows. The first section details evolution of fiscal risks in China from a historical perspective. The second section uses fiscal matrix to specify fiscal risks in China from a practical perspective. The third section summarizes the hierarchical system of China's fiscal risk management. The fourth section discusses the challenges and problems in strengthening fiscal risks management in China. The paper concludes with a series of recommendations for improving China's fiscal risk management.

1. Evolution of fiscal risks in China: from a historical perspective

The basis of sound fiscal risks management is on the full understanding and analyzing fiscal risks. In China, this process is accompanied with market-oriented reform and urbanization, during which responsibilities among related parties (including central government, local governments, private sectors and individuals) in the economy are re-clarified and re-shaped, leading to obligations and risks transferring and re-division. The evolutions could be divided into three stages:

(1) First stage: In the planned economy era, dual-structure existed. Within the stated-owned system, governments' obligations were accumulated and unlimited, with risks highly centralized; outside the system, almost few obligations needed to bear.

Under the planned economy, state-owned enterprises were the cores of economy and society. They were entitled to explicit supports from the nation, without competitive pressures and bankruptcy risks. They got fixed and operating capitals by fiscal appropriations. Materials and goods were also planned by the governments. Governments intervened in enterprises' operations. Meanwhile, state-owned enterprises

were the vehicles used to implement programs of a fiscal nature (Bixi and Schick, 2002). Workers in state-owned system were guaranteed by state-owned enterprises, which provided them with unemployment benefit, pension, housing, education and medical services representing the nations. However, persons outside the state-owned system, such as rural persons, were out of the vision of governments. Unlike urban citizens, peasants had their own lands. Their rights, including education, medical service and pension, all depended on arable land.

At that time, fiscal management system “*Tong Shou Tong Zhi*”¹ was adopted. Central government made all decision of revenues and expenditures, while local governments were just the equivalent to the central government's agencies. Thus all obligations fell into the scope of central government.

Under such patterns, state-owned enterprises had few incentives to make profits, and local governments had no enough impetus to collect government revenues. Fiscal opportunism resulted from strong soft constrain and furthered the severity of fiscal pressures. Various risks were thus generated and centralized on the central government.

(2) Second stage: During the transitional period, with social responsibilities of state-owned enterprises separated from economic goals, fiscal risks were transferred, and new risks emerged.

In the late of 1970s, as the important part of gradual reform, dual-track price system was introduced, and market-oriented reform in goods market began in China. Fiscal management started to change with it. By the replacement of fiscal appropriation with lending from banks, and the substitution of profit with tax in two steps, fixed capitals of state-owned enterprises were not completely funded by budget for free and state-owned enterprises should also pay tax to governments. Accompanied with classified state-owned enterprises reform and market-oriented reform in banks, state-owned enterprises in competitive fields gradually gained their independent positions in the market.

To push the reform of state-owned enterprises and promote the equality of all citizens, China initiated the reform in social safety system to establish social safety nets, covering social pension, social assistance and social subsidies, etc. In the early of 1990s, pension service of workers in state-owned enterprises were provided in the form of social pooling instead of enterprises-guarantee. Basic medical insurance system for urban employees was introduced in 1998. Other social responsibilities, such as education and medical service taken by enterprises before, have been transferred to government or market. However, a large number of peasants and citizens without jobs were not covered by social safety nets offered by government, but still depended on the traditional form-land or family.

As for the intergovernmental relations, 1994 tax reform was the signal of fiscal

¹ “*Tong Shou Tong Zhi*”, a highly centralized fiscal system in China, means that local revenues are uniformly turned over to central government, and local governments' expenditures are arranged by central government.

decentralization. Chinese local governments became relatively dependent bodies, having own revenues and taking fiscal responsibilities to some extent. Direct fiscal control by central government has been changed into indirect guarantees and support. While local financing was limited by Budget Law, local state-owned enterprises and other public institutions provided local public goods and quasi-public goods, such as non-basic compulsory education, public medical service, local infrastructures, etc. Most of them did not belong to part of governments under the existing statistical system, so these quasi-fiscal activities, as important off-budget practices, were not subject to strict fiscal supervision and became the main resources of contingent fiscal risks in the future.

Besides that, new risks appeared. To attract more direct foreign investments in China, local governments often made a promise on profit or revenues to investors, which created contingent risks for governments, most of which did not show up in annual government budget.

(3) Third stage: During urbanization process, ternary structure came into being. New governments' obligations expanded with the establishment of social safety system, and financial crisis outside pushed local debt risks explicit.

Rapid urbanization produced the great demands for investments in infrastructures and other public services, such as bridges, roads, public housing, medical and schooling services, etc. A large number of peasants¹ have pouring into urban areas, and became the workers, but most of them cannot get educational, medical, pension and other public services at the same level with local citizens because of difference in urban-rural *hukou* (urban-rural identification). On the other side, peasant workers left their hometowns, and some of them had transferred their lands, which made them not get the full guarantees on education, medical and pension services as their predecessors from lands. Thus, such peasant workers have become the third group in the society.

As social responsibilities of state-owned enterprises were further transferred to governments or market, risks were pooled and governments' obligations expanded. To reduce the disparity between rural and urban areas, and establish social safety nets covering all residents, China pushed the reforms on social pension and social medical care system. New type of pension insurance for rural residents and urban residents' endowment insurance without work was introduced in 2009 and in 2011, respectively. China also began the pilot of basic medical insurance for urban residents in 2007, and then new type of rural cooperative medical care system in 2012 was adopted. All of reforms were carried out under the guidance and support by the governments. The mix of individual contribution and government mandated subsidies creates direct explicit debts for governments.

Further separation of ownership and management and transfer of social responsibilities made most state-owned enterprises independently compete with private sectors. The

¹ According to the data from National Bureau of Statistics, peasant workers in China amount to 27.7 million in 2015, accounting for 20.18% of total population in China.

rapid expansions of state-owned enterprises benefited from economic development and market-oriented incentives mechanism. Direct interventions in state-owned enterprises from governments were replaced with the indirect forms, for examples, recapitalization, credit guarantees, letter of comforts and loan preferential, even when they continually incurred losses. Such off-budget supports, creating main contingent debts for government, had not an immediate negative effect on government budget.

During the urbanization process, the huge gap for municipal infrastructures could not be made up because of the prohibition of local debts, and municipal investment corporations and urban infrastructure construction companies which were affiliates of local governments operated off-budget activities for local infrastructures financing. Local governments' commitments, guarantees and land pledge made the repayment ensured, and also led to the massive accumulations of local contingent debts (Jia, 2004; Feng, 2006). The large stimulus packages in 2008 in response to finance crisis and economic recovery also added up local debts.

But China's economic growth rates and fiscal revenues were both hit by global financial crisis, the former falling from about 10% before crisis to 7% or so in 2015, and the latter dropping from double digit growths to 8.4% in 2014. Fiscal revenues of some resource-rich or outdated industry-dominated provinces even began to register negative growth in 2015. Thus, the maturity mismatch of a profligate of local debts came to light, calling for central government to pay more attention to local debts.

2. Current China's fiscal risk analysis

As a widely accepted method, fiscal risk matrix devised by Brixi (1998) covers different sorts of governments' fiscal obligations: direct or contingent and explicit or implicit.¹ Introduction of contingent and implicit debt broadens the concept of conventional government risks, and provides a useful tool to recognize fiscal risks. It has been adopted in Chinese fiscal risk analysis. This part uses risk matrix to show a comprehensive picture of fiscal risks in current China.

2.1. Fiscal risk matrix in current China

Table 1 describes China's fiscal risk.

2.2. China's risk analysis: size and structure

On December 12, 2013, National Office of Audit, China, released statistical bulletin

¹ Direct obligations mean predictable obligations arising at any event. Contingent obligations reflect occurring if a particular event occurs. Explicit risk is obligations created by a law or contract. Implicit risk is moral obligations based on political pressure and public expectation.

on China's national debts, which not only covers almost all types of government debts (such as direct explicit, direct implicit and contingent explicit obligations¹), but also includes most of public entities (government sectors, public institutions, and non-profit state-owned enterprises). This is the first time for Chinese government to publish the official data on national debts in a comprehensive perspective, which became the benchmark for improving China's fiscal risks management.

Table 1
China's fiscal risk matrix

Type	Direct (obligations which happen at any event)	Contingent (obligations if a particular event happens)
Explicit: Regulated by laws or contracts	1.national bonds; 2.sovereign debt issuing to foreign; 3.nondiscretionary spending regulated by law (subsidies to pension insurance and medical insurance); 4.future civil service, public pension and public medical insurances regulated by law; 5.future civil service salaries.	1.state guarantees for local governments' external loans; 2.state guarantees for public and private sector entities (such as development banks).
Implicit: Moral obligations based on political pressures and public expectations	1.future recurrent costs of public investment projects; 2.gap of pensions and medical insurance provided by local governments; 3.future obligations for more coverage of compulsory education.	1. costs to stabilize finance systems, (for example, writing off bad loans, special bonds for recapitalization); 2.costs for deepening state-owned enterprises reforms (writing off part of investment in SOEs, basic pension, living expenses for unemployed workers) ; 3.bad debt reserves for non-commercial bank; 4. default of a subnational government or public/private entity on nonguaranteed debt; 5.foreign debts without the central government's guarantee (including finance institutions and enterprises); 6. bailout of local governments; 7.environmental recovery and disaster relief.

According to the audited data, the explicit direct obligations at all levels of governments were 19065.859 billion Chinese yuan, accounting for 36.74% of GDP at of the end of 2012 (see table 2). Based on the highest probability of contingent obligation finally taken by central government in the past, total liabilities (including direct and contingent obligations) were equivalent to 39.43% of GDP at the end of 2012.

As for the debt structures, the size of direct explicit obligations taken by central government is almost the same as the local governments. But the guaranteed obligations mostly fall into the ranges of local governments (including their full allocation units), about ten times the size of central government, which demonstrates

¹ Sometimes, it is impossible to assess implicit contingent debt, so it is not included in the statistical data.

that compared with central government, local governments are inclined to choose off-budget activities because of the pressures from the requirement of budget balance.

Table 2

China's national obligations (at the end of June, 2013, amount in billion yuan)

Time	Level of government	Direct explicit obligations	Government contingent obligations	
			Guaranteed obligations	Implicit obligations
At the end of 2012	Central	9437.672 ^a	283.571 ^b	2162.116 ^c
	Sub-national	9628.187 ^d	2487.129 ^e	3770.516 ^f
	Total	19065.859	2770.700	5932.632
At the end of June 2013	Central	9812.948	260.072	2311.084
	Sub-national	10885.917	2665.577	4339.372
	Total	20698.865	2925.649	6650.456

Note: ^a Treasuries and loans from international organizations and foreign countries, repaid by central government.

^b Loans borrowed by central government's departments and their affiliates, repaid with non-fiscal funds.

^c Obligations mainly from central subordinate universities, hospitals and research institutions (balance allocation units).

^d Treasuries re-lending to central government's departments and their affiliates, repaid with non-public finance; loans borrowed from international financial organizations and foreign governments; bonds issued by Central Huijin Investment Company Limited to finance business banks and China Export & Credit Insurance Corporation, secured by MOF.

^e Government debts by guarantees, including ones by fully-funded public institutions.

^f Local government debts through state-owned or state-controlled corporations, self-financing public institutions; government loans through BT(built and transfer), finance lease and underwritten construction, repaid by non-fiscal capitals.

Source: Surveys from the National Office of Audit, China, December, 2013.

At the end of 2015, Ministry of Finance released China's total government debts 26.66 trillion yuan, equivalent to 39.4% of GDP, with central government debts 10.66 trillion yuan and local debts 16 trillion yuan. Considering contingent liabilities, total debt ratio increased from 39.43% to 41.5%, still below the warning line of 60% set by EU and the debt level of most economies and emerging nations (Japan above 200%, U.S.A. and France above 120%, German about 80%, Brazil about 100%).¹ But in the past two years, local government direct explicit debts increased so fast at the annual growth rate of 21.24%, partly because issuing local bonds makes local contingent obligations direct and explicit.

3. Fiscal risk management in China: transformation under fiscal stress

The impetus to strengthen China's fiscal risk management mainly comes from fiscal

¹ Data comes from the MOF of China.

stresses during transitional reform and the needs for sustaining fiscal sustainability and economic stability in China. The process is also promoted by the comprehensive understanding of fiscal risks.

3.1. Evolutions of fiscal risk management

The focus of fiscal risks is long overdue in China (Krumm and Wong, 2002). Until 1950, China ended the history without foreign and domestic debts. Since that, government debts just referred to treasury bonds, part of direct explicit obligations of central government, for local governments were not permitted to borrow.

Chinese government implements debt limit management strategy. Official deficit ratio in China always was set below 1.5%-2.5% of GDP throughout the past two decades of transition to market economy (Krumm and Wong, 2002). But the data on national debts and government deficits ratio only covered bonds issued by central government (Liu, 2003), without counting local debts and expected expenditures or committed costs assumed by governments in the future.

Until 1990s, some Chinese scholars began to concern about governments' quasi-fiscal activities and off-balance-sheet risks. Fan (1999) created the concept of national comprehensive debt ratio and national comprehensive financial risks, focusing on the effects of bad loans of state-owned banks on China's fiscal risks; Zhang (2000) broadened the coverage of national risks and compiled the balance sheet of China's public sectors, using public sectors' debts instead of government's debts to assess China's debt sustainability. Almost at the same period, fiscal risk matrix (Brix, 1998) was introduced into China. Theoretical explanations and methods provided the analytical framework for China's fiscal management.

In practice, costs for state-owned enterprises reform and future obligations for the establishment of social safety systems during the transition really increased governments' fiscal expenditures. Fiscal stimulus packages, which were implemented for financial crises, continued to cumulate government debts. As the coverage of government debts broadened and contingent debts became direct, Chinese official government deficit ratio reached to 2.4% in 2015. The ratio is expected to 3% in 2016, which is set by EU Maastricht Treaty and considered to be current China's standard for debt limit ceiling. Pressures of potential fiscal risks and worrying about the negative effects of relatively high leverage on economic stability call for a hierarchical system to regulate China's fiscal risks.

3.2. A hierarchical system of fiscal risk management in China

A hierarchical system of fiscal risk management comprises institutional framework at the macro level and provisions at the micro level.

(1) Fiscal risk management: A macro-economic framework and perspective. Until

now, there is the common sense that public sector is not the only resource of fiscal risks. A clear links between fiscal vulnerability and financial sector vulnerability exist (Downes, Marson and Otker, 1999; Hemming and Petrie, 2002), which will be strengthened by stronger relationships among different sectors in the economy. In special periods, risks originated from private sectors have to been assumed by government under pressures from the public (Brixi, 1998). It means that risks could be shared and transferred between different sectors in an interrelated economic system. Therefore, the analysis of fiscal risks should not be just limited to government, even public sectors, but require a macro-economic framework covering all important sectors in economy. This is especially true for China because of its transitional reform and economic structures.

As a widely used method, national balance sheet assesses national fiscal risks based on risk diversification and transferring among different sectors in the whole economy. Although there is still no official version released in China, some scholars (Li, 2013; Ma, 2012) have complied China's national balance sheet to evaluate China's national risks and fiscal sustainability. According to research by Li's team, total risks in China are controllable, with net worth of China increasing from 165.8 trillion Chinese yuan in 2007 to 352.2 trillion yuan in 2013, but some fields or areas face the rising risks of default.

Based on the balance sheets of different sectors, the research concludes that the relatively high leverage of non-financial sectors and local governments will probably threaten fiscal sustainability and the stability of Chinese economy in the short term, while the gap of pension and implicit bad loans in bank systems will pose a great challenge to China in the long term. IMF (2016) also draws the same conclusion. Li (2013) also pointed out four measures to deal with rising risks: transferring risks from local governments to central government, for example, local debt swap; transferring risks from governments to private sectors; transferring risks from private sectors to governments, such as recapitalization and nationalization of enterprises or banks; transferring risks between enterprises and individuals.

Although there still exists much rooms for improvement in increasing accuracy and supplementing information, national balance sheet gives a macro-economic framework for evaluating risk diversification and fully understanding risk transmit channels and potential obligations for governments.

(2) Fiscal risk management: Institutional framework. Being a unitary country, China adopts a mixed system of centralized supervision and decentralized management to control fiscal risks in public sectors.

First, fiscal risk supervision is centralized. Central government is responsible for total China's fiscal risk management. According to Budget Law of China (2014 Amendment) released on August 31, 2014, an annual ceiling in the stock of debts, including both central debts and local bonds, could not overpass the limit approved by National People's Congress. The State Council sets the limits of issuing local debts for provinces every year.

Second, fiscal risk management is decentralized. Each province should be accountable for managing its own debts in a prudent manner. Central government doesn't endorse the issuance of local debts. Local governments and their affiliations also cannot provide any type of guarantee for liabilities of any units or individuals except as otherwise stipulated by law.

Third, comprehensive debt information system is established. Identifying and recognizing fiscal risk are the basic requirements for controlling fiscal risks (Brix and Schick, 2002). Since 2000, Ministry of Finance launched a pilot in recording all types of local debts. In 2013, National Office of Audit, first released the size and structures of national debts, including bonds, guarantees, pension, etc., and assessed national exposure to fiscal risks on the basis of fiscal risk matrix. The reliable and comprehensive debt information system has been established and takes a solid foundation for China's fiscal risk management.

Fourth, debt management falls into the responsibility of Ministry of Finance. Finance departments are responsible for collecting, analyzing debt information and monitoring, managing public sector debts. Local governments and their affiliations have to report their financial data on budget, debts, assets and liabilities to finance departments at the corresponding level.

Fifth, debt risks management is under the supervision of budget. Debt issuance and the repayment of interest and capital including government direct and contingent debts should be listed and regulated in the budget. Every year, local debts set by the State Council and approved by National People's Congress should be included into budget adjustment, and also be approved by Standing Committee of the People's Congress at the corresponding level. Borrowing should have debt repayment plan and a stable source of funds to repay, and just be used for capital expenditures on public welfare, not for governments' recurrent expenditures.

Sixth, accrual-accounting and reporting system is introduced. In the past several decades, accrual-basis accounting and reporting system has been adopted by many countries in the treatment of fiscal sustainability, for comprehensive financial information on governments' assets and liabilities, accurate data on costs and efficiency, and the possible comparison of products (services) provided by government and market. To reflect the real fiscal risk level and increase efficiency in public sector, China introduced accrual-basis principle to public sector. In 2016, Ministry of Finance promulgated *Guideline for Compiling Government Balance Sheet*, requiring government balance sheet should cover income, expenditure, assets and obligations, including pension, guarantee, etc. National Office of Audit, relatively independent body to regulate fiscal risks, is entitled to audit the balance sheet compiled by finance departments at the corresponding level. Incorporating assets and contingent liabilities into risk assessment makes more complete disclosure of government fiscal position and performance, and evaluate the liquidity and solvency of public sectors.

(3) Specific risk management: Local debts risk transfer and management. Sub-national debt risk is one of important sources of fiscal risks in China now. Much attention has been paid to the high leverages of local governments in China, especially in some areas lack of industrial structures diversity or over-dependent on resources. Local debts, with the limit to reach 17.1874 trillion yuan at the end of 2016 (MOF, 2016) not only are accumulated by the demands for huge capitals during the process of urbanization, but also related to the unreasonable financing systems resulting from institutional obstacles. Strong soft budget constraint between inter governments enhances the expectation of bailout of local government in distress, and further strengthens fiscal opportunism. Overdependence on public investments in quasi-public goods, such as infrastructures is not good at increasing efficiency of public goods, and piles up huge fiscal risks which gradually becomes a threat to the whole economy. Therefore, measures should be taken to control local debts risks.

First, administration and market-mixed principles are adopted. China adopts administration and market-mixed principles to regulate local debt risks. Since 2014, provinces in China have been entitled to issue local bonds just as local capital expenditures, but every year, issuing ceiling of local bonds is set by central government and approved by National People's Congress in advance. Ministry of Finance also publishes the regulations on local bonds issuing, explicitly pointing out that local governments should take responsibilities of own debts, which is regarded as a strong sign of hardening budget constraints between central and local governments. Interest rates on local bonds and issuing costs should be determined by the market. The replacement of local bonds in bond market instead of local state-owned enterprise bonds is a good practice to make implicit local debts explicit, regulated and transparent.

Second, risks are transferred from local governments to private sectors. Experiences in developed countries and emerging economies show that adoption and prevalence of Private-Public Partnership in the fields of infrastructures, energy, electricity, etc., can attract a profligate of long-term capitals to invest in quasi-public goods, increase resources reallocation efficiency, and reduce the pressure of local debts (IMF, 2006). It means that some parts of fiscal risks are undertaken by private sectors. Such trend also has prevailed in China in recent years. Ministry of Finance and Committee of Development and Reform publish documents, encouraging and regulating social capitals to invest in and operate quasi-public goods or services through franchising.

Third, risks are transferred from local governments to central government. Local debt risks mainly come from the maturity mismatch between short-term or middle-term debts from banks or trust companies and long-term return of infrastructure projects because of borrowing restrict by old Budget Law. To spread the risks, China initiated the plan of local debts swap. From 2015, long-term local bonds have been issued under the supervision of central government, to partly swap previous short-term or medium-term local debts. In the short-term, central government administration

provides guarantee for local debts swap. It helps the establishment of local bonds market, and strength the confidence of the market on local bonds, attracting more capital into investment in local infrastructure during transitional periods. But the support is considered to be temporary. Establishing local bond market operating in market principle and regulating local government financing are the core goals of the reform. According to the report by MOF (2015), the amount of local government debt swap reached 3.2 trillion yuan in 2015.

Fourth, fiscal risk warning system is established. In 2011, the State Council promulgated *Guideline for Strengthening Local Debt Risk Management*, requiring the establishment of evaluation and pre-warning system, emergency mechanism and accountability system. Ministry of Finance improved issuing mechanism of local bonds, cleaning up and regulating local financing corporations. It also set up risk control system, tracking the level of income and expenditure levels and the ability of local government to borrow. Budget Law (2014 amendment) effective on January, 1, 2015, states that local government and its affiliates cannot provide any form of guarantees, separating financing function from non-profit state-owned enterprises, the most important source of contingent risks. In addition, PPP expenditures from fiscal appropriation should be included in the budget and approved by People's Congress.

At the province level, by the end of June, 2013, 23 provinces (63.89% of all provinces), 298 (76.21% of all municipalizes) and 1736 prefectures (62.49% of all prefectures) respectively have come up with 2793 regulations on borrowing, repayment, usage and management of local debts. By the end of June, 2016, 18 provinces, 156 municipalities, 935 prefectures have set up pre-warning mechanism to forecast and regulate local fiscal risk. 28 provinces, 254 municipalities and 755 prefectures have built risk reserve system, with total risk reserve amounting to 326.550 billion yuan (National Office of Audit, 2013). The framework for regulating PPP and local governments' financing has been established.

4. The challenges for fiscal risks in China

Risks mainly derive from uncertainty. The IMF defines fiscal risks as the possibility of short to medium-term deviations in fiscal variables from what was anticipated in the government budget or other fiscal forecast (IMF, 2008). It means that fiscal risks represents the form of fiscal variables including fiscal revenue, expenditure, fiscal balance and the value of assets and liabilities which fluctuate more than the expected. The unanticipated volatilities mostly are resulted not only from the uncertainty of macro-economic environment, the change of social structures and regulation adjustment, but also are always relevant to economic structures, social structures, social psychology and government management (Liu, 2003; Feng, 2006).

When managing its fiscal risks, China confronts similar problems like other countries - the deficiency of new analytical framework, the shortage of analytical instruments and the inadequate disclosure of debt data (Bixi and Schick, 2002). Besides, as a second largest economics and transitional country, several special factors have contributed to China's exposure to more fiscal risks. The challenges of China's fiscal risk management fall in two dimensions: macro-economic contexts and institutional framework.

4.1. Challenges from macro-economic contexts

The major fiscal risk that most governments face is the exposure of government finances, such as government revenues, expenditures, liabilities and assets, to unexpected variations in economic growth and other macro-economic parameters, including economic growth, exchange rate, inflation and key commodity growth (Petrie, 2013). Government's absorption capacity of fiscal risks is limited by possible macroeconomic constraints (Bixi and Mody, 2002).

(1) Macro-economic outward shocks: As an export-oriented economy with foreign trade dependence reaching 45% - 50% in the past 5 years, China's economy has closely correlated with the rest of world, and is more prone to be hit by outside shocks. Until now, international economy still suffers from the sequels of finances crises. Being the economic engine, U.S.A. is obsessed with inefficient demand and lack of great innovation to support economy in a sustainable way. The slow recovery of European economy is troubled by fiscal risks breaking out in some members. Weak demands in the world fire up the conflicts between overcapacity and inefficient demands, creating great pressures on such manufacturing countries like China.

Chinese economic growth rate has fallen from about 9% between 2000 and 2012 to 7.6 % in 2015. The annual growth rate of fiscal revenues dropped from about 20% to 8.4% in 2014 because of economic recession, threatening China's fiscal sustainability considering the increasing fiscal expenditures in pension, medical insurance, etc. In the short and medium-term, the stagnant international economy will be most important uncertain factor for China's economic and financial parameters.

(2) Economic transformation increases government short and medium-term expenditures and brings out more volatility of economic growth and fiscal revenues. Under the pressure of cutting overcapacity and realizing economic rebalance, China pushed the economic structural transformation from the dependence on manufactures to tertiary industry, and economic updating from extensive resource-dependent pattern to intensive innovation-oriented model. Reform means institutional change with uncertainty. Effects of such strategy on economy and taxation are not sure, probably leading to the unanticipated volatility of fiscal revenues. On the other side, bankruptcy and reunion of zombie companies owned by governments, increase public

expenditures in pension and insurance for the unemployed. Contingent obligations of governments paid for protecting outdated industrial capacity are explicit. In addition, rapid transformation to tertiary industry-dominated economy certainly slows the economic growth ratio, because of tertiary industry's relative lower production rate compared with manufactures-dominated one, which means economic structure reform will have a lasting effect on the fiscal revenue growth and related financial variables.

(3) Ongoing fiscal system reform will re-establish inter-government relations, but increase the volatility of fiscal revenues in the short term. In 2014, China imitated to replace business tax with value-added tax reform, the most important fiscal reform since 1994 tax-sharing system reform. China wants to match governments' responsibilities with expenditures to harden soft constrain and reduce the incentives of local debt expansion. But in the short term, institutional change has a negative effect on fiscal parameters and interest pattern. According to the statistics from China State Administration of Taxation, tax revenues decreased about 210.7 billion yuan because of replacing business tax with value-added tax for the past 7 months in 2016.

(4) Aging: Establishment of more fair and sustainable social safety nets covering all citizens is one of the important goals in the 13th Five-Year Plan of Chinese government - the blueprint and political promise for the next coming five years. But against the tendency of aging, a promise of high pension and health benefits will impose a big burden on government fiscal expenditure and threaten fiscal sustainability in the future, which has happened in some of West European countries in crisis (IMF, 2008, 2009). And it's especially true for China, an aging society without wealth.

In the period of 12th Five-Year Plan, the shortage of social funds emerged. Annual growth rate of basic pension payment of enterprises employees is 6.6% higher than pension contribution, and annual revenue-expenditure gap in medical insurance of employees and rural-urban citizens are 2.3% and 5%, respectively. According to the research, the total payment to enterprises employees' pension systems and subsidies to citizen's pension systems is projected to be 95% of GDP (low substitution rate) or 122% of GDP (high substitution rate) in 2050. Accumulated gap of social safety nets is so huge that it would become the potential greatest burden for China in the long-term. Furthermore, the division of responsibilities of income guarantee and medical care service among central government, local government, enterprises and individuals is still not clear. So, high expectations for governments intensify the concentration of risks and costs on governments.

(5) Urbanization: With the rapid development of China economy, urbanization has sped up, with the ratio of urbanization increasing from 17.92% in 1978 to 52.57% in 2012.¹ In 2020, it is expected to be 60% above.² But from the long respective,

¹ Data comes from National Bureau of Statistics in China.

² On the assumption, that the annual growth rate of urbanization is 1%.

urbanization dominated by government is becoming a great challenge for the sustainability of government finance.

First, huge demands for investment in municipal infrastructures impose great pressure on fiscal expenditures. The gaps of investment in city public infrastructures will remain in the next few years, especially in central and western provinces. Old financing pattern of local government mostly operated off-budget and accumulated about 16 trillion local debts in an unsustainable ways. Although introduction of public-private partnership is regarded as one of main measures to reduce the pressure from local financing and debt risk, and increases the efficiency of public goods, new risk probably occurs. Guarantee or promise of profit provided by government in PPP instead of previous direct borrowing increases the uncertainty of future public expenditures. Second, the equalization of basic public services will increase the potential financial risks governments face. The significant gaps in welfare, such as income, education, housing, medical treatment and employment between citizens and migrants, rural and urban citizens exist. For example, Gini coefficient has hovered about 0.48 since 2003. The gaps have become one source of unfairness and instability in China. According to data from Guangdong Province, local government will expense extra 99 thousand yuan for one peasant immigrant.¹ Considering about more 100 billion new immigrants till 2020, huge extra demands of new immigrants for basic public services, especially medical treatment, pension, education and environment protection certainly put great pressures on the local finance in the future.

(6) Social pressures in transitional process from social psychology probably lead to extra governments' expenditures. Traditional social pattern and social psychology changed with the economic development and transitional process. In China, traditional dependence on family to provide education, medical service and old-age care gradually collapsed, and safety system provided by public institutions and state-owned enterprises in high-planned economy was also broken. Now with the establishment of modern society, more expectations for basic public services are projected to the governments. Besides, transitional process involves interest's adjustment. Economic development, increasing literacy ratio and rapid spread of Internet, mobile, and other emerging media promote citizens' consciousness of independence, democracy, and the expression of different interest demands. Relations between nation and society, between individuals and society result in diversified social psychologies, one of important decisive factors in shaping social and political pressures now. Propelled by special situations, the appeals or pressures probably break out, resulting in the extraordinary expansion of government responsibilities beyond the expectations of government. During the transitional period,

¹ Expenditure on peasant workers is a long-term process. In the short term, main expenditures lie in compulsory education and affordable housing; subsidies to insurance are main costs. The former accounts for 1/3 of total cost, and the latter is about 40%-50% of total cost, which is strongly influenced by the policy of payment of pension (The Beijing News, March 30, 2013)

interest conflicts will happen more frequently and certainly increase the risk that governments confront (Liu, 2003; Feng, 2006).

4.2. Challenges from institutional framework

Institutional framework for fiscal risks involves institutional designs and policy making, which affects government's the incentives and the ability to constrain, control and manage its fiscal risks. Sound institution and systems are inclined to make less room for fiscal opportunity and promote risk-awareness (Brix and Mody, 2002). In reality, there are still some challenges in institutional framework to inspire uncertainty and increase government risks.

(1) Shortage of law framework for risk sharing. Risk division, transferring and mitigating should be confirmed and then guaranteed to execute as laws regulate or contracts agree. However, incomplete or even deficient law framework for risk sharing and property right protection in some fields cannot provide a clear frame to dissipate and absorb risks among related parties. It means that private sectors and other related parties in society are not given enough incentives and confidences to bear risks. So, when interests are re-divided during economic reform, risks or obligations cannot be dissipated and transferred in new interest patterns.

Now, rights don't clearly match with corresponding obligations. Such drawbacks in economic and administrative systems contributed to fiscal risks accumulating rapidly and centralizing on governments to some degree (Liu, 2003).

(2) Lack of market and instruments for risk transfer and mitigation. Like other developing countries, difficulties in transferring and mitigating governments' risks in China partly are due to lack of well-regulated long-term capital or insurance market and the deficiency of diversified risk instruments, thus not providing more options to individuals and entities which are willing and able to bear risks in the market (Petrie, 2013). China's bonds market made a slow development. Although the stock of bonds amounts to 46.4 trillion yuan at the end of 2015 because of local debts swap, the bond terms tend to be short-term. According to WIND data, in the past 5 years, the ratio of short-term bonds to the total has arisen from 47.67% to 55.32%, and ultra-short bonds even has hopped from 9.84% to 38.92%. As for the country's interbank market, in 2015, below one-year bonds issuing accounts to 48.02%, but above 10-year bonds issued just about 590.776 billion yuan, with 2.81% of the total.¹ The short-term structure in bond market cannot satisfy the demands for huge long-term capitals such as infrastructures. Besides, low level of capital securitization also impedes the liquidity of long-term bonds, and is not good at transferring and diversifying long-term risks.

(3) Short-sighted decision making: As a policy or measure has been made and passed through, it will cause extra expenditures or future obligations for governments.

¹ Data comes from WIND.

Government policy making is mostly based on the current judgments and future economic expectations. So, more precise and forward-sighted projection and estimation during policy making process seem important, especially for government's long-term payments or obligations, such as education, pension and medical insurance. But in reality, these entitlement programs often come out when the high growth of fiscal revenues and high possibility of social disputes co-exist. Over optimism on economic development and fiscal revenue or more social pressures from social conflicts often make government easily come to more aggressive measures than it should and could take in the long-term, ignoring economic cycle and fiscal sustainability. As soon as economy recedes, indirect and implicit obligations over capability become direct expenditures for governments. Such situations have occurred in some areas in China, and probably tend to be more serious without economic recovery.

(4) With the opening up and economic transition, financial system will probably create more risks. Financial system is the most serious source of contingent implicit obligation (Brixi and Mody, 2002). As the last resort, government is expected to take the responsibility of sustaining the stability of financial system, which is the basis of economic stability and social development. China's financial system is mainly dominated by state-owned big banks, so risks in economy and society agglomerate in bank system through complex loan relationships. With the integration of international financial market and internationalization of RMB, financial system will absorb more capitals, but at the same time, face the higher probability of being hit by outside shocks. Moreover, costs for economic transformation make bank system confront higher risks of bad loan and loss, which probably have to be assumed by government at last.

(5) Soft budget constraints between inter governments creates strong expectation of bailout and fiscal opportunism. As a lengthy tradition of paternalistic state and a unitary country, China's central government is more inclined to bail out local governments in distress. Mismatch of revenues and expenditures and overdependence on transfer strengthen soft budget constraints, and make central government expose to higher risks to rescue (Feng, 2006). Implicit guarantees provided by central government function like the leverage. It boosts the rapid expansion of local economy during the boom, but hides costs of change and retards the process of reform. When economy comes to recession, guarantees become due and local economy will be hit more seriously by the risks of higher leverage.

(6) Budget doesn't fully play a role in risks. First, China still primarily adopts one-year budget as the standard for appropriation and policy decision and began to make a pilot complication of 3-year term budget in 2015. The time horizon is too short to account for the volatility of economic situation or policy on revenues and expenditures, especially when pension systems and other entitlements are established and long-term loans are issued or guaranteed. Second, during the budget process, risk analysis and the comparison between direct and contingent expenditures have not been introduced in annual budget. Current annual budget does not cover all information on government

contingent liabilities, the probability of default and related background information, such as guarantee loans, pension and other possible costs, therefore cannot provide sufficient risk assessment for governments.

5. Suggestions for strengthening risk management

5.1. Establishment of macro-economic analytical framework for fiscal risks

The reality or prospect of unbudgeted fiscal risks coming due has been a wakeup call to extend fiscal management beyond the budget to all action and transactions (Brix and Schick, 2002). Comprehensive analytical framework beyond the traditional respective is required. First, the target of fiscal risks management is set under macro-economic framework, not just narrowly focusing on debt sustainability. As a last resort of risks emanating from other parts of the economy, and also a source of risks to the rest of the economy, the general objective of risk management is not to minimize government fiscal risks, but to cost-effectively dissipate or transfer those risks and bear undissipated risks at the lower economic and social cost in the economy. Second, to improve comprehensive macro-economic analytical framework for risks. In addition to creating instruments for analyzing specific risks, such as pension, financial sectors and guarantees, etc., it is necessary for government to compile and publish the whole China's national wealth and multi-sectors' balance sheets, extend the analysis of fiscal risk to cover macro-economic system, and assess risks under the idea of risk transferring and capital circulations.

5.2. Establishment of legal framework for fiscal risks to dissipate and transfer

Law environments and institutions are fundamental for risk-sharing in credit society. Institution framework affects related parties' the incentives to constrain, control and manage risks (Brix and mody, 2002). Good institutions will provide such a framework that realizes the conformity of rights and duties in the society, and minimize the rooms for fiscal opportunism.

The 19th National Congress released the establishment of law-ruled society as the main goal in the next 10 years, which means the relationship between government and market should be regulated by law instead of people-ruled. So, to further promote the development of credit system helps identify the obligations and protect property rights, thus providing enough incentives and confidences for entities in society to share and bear risks.

In addition, to develop law framework to regulate government activities and related obligations by law, and clarify risk-sharing mechanism and interests adjustment pattern under the law framework are beneficial to the economic development and raising economic capacity (Liu, 2003).

5.3. Development of markets to dissipate and transfer risks

(1) To clear the responsibilities taken by government and market through reform, and clarify related risks according to the principle that who should and could bear. Obscure boundary of government and market tend to make government probably take more obligations, some of which should be undertaken by market or private sectors. So, sound risk management should be based on the clear division of responsibilities and obligations between government and market, that is, what should government do and which responsibilities fall into the fields of market?

(2) To regulate capital market and develop long-term bond and insurance market. First, to promote healthy and sustainable development of direct financial system, increasing financing volumes in stock market helps reduce the whole leverage of the economy. Second, diversified financial instruments, long-term bonds, reinsurance and securitized products will provide more options for private capitals, which are willing to and able to bear risks, and make risks transfer and dissipate. Third, under the strict regulation, to push forward the reform of asset backed securitization and provide more multi-terms financial products will facilitate the liquidity of long-term assets and help dissipate risks among markets.

(3) To regulate local government financing and develop long-term local bond market will attract more long-term capitals for local infrastructures and reduce local debts risks for maturity mismatch. At the same time, more attentions are paid to PPP, the new mechanisms for risk assignments. Establishment of law-ruled framework for PPP reduces the possibility of government excessive exposures to new potential risks which should be taken and accountable for private partners.

5.4. Establishment of institutional framework for fiscal risk management

(1) To carry forward China's fiscal reform and clarify intergovernmental responsibilities. Match of revenues with responsibilities helps reduce budget soft constraint and decrease the expectations of bailout and fiscal risks from fiscal opportunism.

(2) To introduce risk factors to annual budget. First, to compile medium and long-term budget considering macro-fiscal scenarios and related impacts on public finances can reduce risks of abrupt market reactions to unexpected adverse situation. Second, incorporating risks into budget process and giving opportunities for government to compare the costs and risks between direct and contingent obligations should be introduced.

(3) To promote fiscal transparency, increase the coverage of fiscal risks and disclose the details of overall fiscal risks in the context of macro-economic outlook with specific fiscal risks, especially focusing on high-risks areas, such as SOEs, public financial institutions, subnational governments and pension funds. In addition, to publish comprehensive statement of fiscal risks and accrual-basis national balance

sheet is also a practical method to identify fiscal risks.

(4) To routinely monitor risks in the context of macro-economic framework, considering risk transferring and dissipation between related parties.

References

- Brixi, H. P. (1998). Contingent Government Liabilities: A Hidden Risk for Fiscal Stability. The World Bank Policy Research Working Paper.
- Brixi, H. P., & Mody, A. (2002). Dealing with Government Fiscal Risk: An Overview. in Brixi, H. P., & Schick, A. (eds.), *Government at Risk: contingent liabilities and fiscal risk*. A Copublication of The World Bank and Oxford University Press.
- Brixi, H. P., & Schick, A. (2002). Government at Risk: Contingent Liabilities and Fiscal Risk. No. 15233 in World Bank Publications from The World Bank.
- Downes, P., Marston, D., & Otker, I. (1999). Mapping Financial Sector Vulnerability in a Non-Crisis Country. No 99/4, IMF Policy Discussion Papers.
- Fan, G. (1999). On National Comprehensive Liabilities and also on how to deal with bank bad assets. *Economic Research Journal (Jingji Yanjiu)*, 5, 11-17.
- Feng, J. (2009). Problems and countermeasures of local government debt in China. *Public Finance Research (Caizheng Yanjiu)*, 4, 9-12.
- Hemming, R., & Petrie, M. (2002). A Framework for Assessing Fiscal Vulnerability. No 00/52, IMF Working Papers.
- Jia, K. (2004). On the adjustment of Proactive Fiscal Policy and long-term treasury bonds for construction. *International Taxation in China (Shewai Shuiwu)*, 8, 6-7.
- Krumm, K. L., & Wong, C. P. (2002). Analyzing Government Fiscal Risk Exposure in China. in Brixi, H. P., & Schick, A. (eds.), *Government at Risk: contingent liabilities and fiscal risk*. A Copublication of the World Bank and Oxford University Press, 235-250.
- Li, Y. (2013). *China's national balance sheet 2013: theories, methods, and risk assessment*. China Social Sciences Press. (in Chinese)
- Liu, S. (2003). Framework on China's Fiscal Risk. *Economic Research Journal (Jingji Yanjiu)*, 5, 23-31.
- Ma, J. (2012). *A study of China's national balance sheet*. Social Sciences Academic Press (China). (in Chinese)
- Petire, M. (2013). *Fiscal Transparency in Open Government Partnership Member Countries*. Presentation to the OGP-GIFT Fiscal Openness Working Group, London Workshop, 2 November 2013.
- Zhang, C. (2000). How to assess the sustainability of government debt in China. *Economic Research Journal (Jingji Yanjiu)*, 2, 66-71.