Strengthening Subnational Debt Financing and Managing Risks

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I. Introduction

The Chinese Budget Law prevents subnational governments from borrowing. However, subnational governments (SNG) borrow indirectly off-budget, through Urban Development and Investment Corporations (UDIC). There are various estimates on the off-budget liabilities, with one estimate having the liabilities at more than 30% of GDP.

The off-budget financing has supported large-scale urban infrastructure transformation in China. Financing infrastructure through land leasing and bank loans securitized on land and property valuation accounts for 80–90% of infrastructure financing by SNG in China. The off-budget financing has not only expanded the financial resources, but also facilitated the development of competitive land and housing markets.

However, as China enters the new phase of economic growth and scientific development, off-budget borrowing has limitations which could constrain future infrastructure development, augment fiscal risks, and impede financial market development. Financing infrastructure through land lease is not sustainable in the long run, because of its one-time nature. Off-budget debt can create implicit and contingent liabilities for SNG, and may also implicate the central budget.

The solution to the large off-budget subnational debt does not lie in prohibiting subnational borrowing. Allowing SNG/UDIC to directly access market for debt financing has several benefits. Subnational debt financing will continue to be important for infrastructure financing in China’s urbanization drive. As demonstrated by the US experience, SNG and SPV market financing are viable provided they are properly regulated. Subnational borrowing finances infrastructure more efficiently and equitably. Infrastructure investment benefits future generations, who should therefore also bear a portion of the cost achieving intergenerational equity. Amortization of the liabilities should be matched by depreciation of the assets being financed. Matching asset life to maturity is a sound public policy because these infrastructure services can and should be paid for by the beneficiaries of the financed services.

Other benefits of market financing include exposing SNG to market disciplines and reporting requirements, hence helping strengthen fiscal transparency, sound budget and financial management, and good governance.

Expanding SNG borrowing also facilitates the development of financial markets. A competitive subnational credit market with numerous buyers and sellers and financial options, such as bond

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2. The central government also issues bonds and on-lends proceeds to SNGs, including letting SNGs use loans from multinational organizations through sovereign guarantees. Fiscal transfers play a minimal role in infrastructure financing; user fees are extensive in financing operations and maintenance in coastal regions. Subsidies and fiscal transfers are playing an important role in financing infrastructure in rural and lagging regions. UDICs also issue infrastructure bonds, with central approval on a case by case basis. Private financing is emerging. See Liu (2008).
4. The land-use right transfer fee is a one-time payment made by land users for obtaining urban land-use rights for a period of time, usually about 70 years for residential use and 40 years for commercial use.
5. However, borrowing to finance infrastructure can burden future generations with debt without corresponding benefits when infrastructure is badly planned and managed.
financing competing with bank lending, can help diversify subnational credit markets and lower borrowing cost. Diversified subnational credit markets can also provide more investment instruments for institutional and individual investors.

China has taken important steps in addressing off-budget liabilities. Over 10 provinces (e.g., Beijing, Guangdong, and Zhejiang) have initiated reforms in managing debt risks. Pilot projects have been launched to have S&P assess the credit conditions of over a dozen UDIC. As part of the fiscal stimulus, China has for the first time allowed provinces to issue bonds (with the Ministry of Finance as the issuing agency), to establish a direct link between provinces as borrowers and their debt payments.

This paper provides a discussion of more reform options for China, anchored with cross-country experiences and lessons. The way forward is to develop regulatory frameworks that can expand SNG and UDIC market access and debt financing, while strengthening subnational fiscal discipline, managing default risks, promoting capital market development, and supporting macroeconomic management and a stable financial system.

The paper is organized as follows. Section 2 presents fiscal rules and framework – ex ante regulations for subnational debt issuing and procedures. Section 3 discusses what to do when a subnational government becomes insolvent – ex post system. Section 4 is devoted to developing regulatory frameworks for UDIC, which may require a debt restructuring system different from a system for direct debt of SNG. Ex post debt restructuring for UDIC may also differ from the existing bankruptcy code in China for corporations due to the fundamental difference between a public entity and a private corporation. Section 5 focuses on strengthening debt management capacity of SNG particularly with respect to liquidity and refinancing risks. Section 6 focuses on managing fiscal risks of land financing, given its prevalent use in China. Section 7 discusses the development of a competitive and diversified subnational debt market. Section 8 concludes with suggested reform options.

II. Fiscal Rules and Framework for Subnational Governments

Fiscal rules and framework for SNG with respect to debt financing, i.e. ex ante regulation, lay out procedures for subnational government to issue debt – purposes, types, amount of debt that can be issued as well as the institutional mechanism for approval and monitoring of debt.

The objective is to provide guidelines and procedures for the issuance of debt and to manage borrowing risks. This section sketches some key elements of the fiscal rules, while a full-fledged regulatory framework requires careful deliberation with country context in mind.

The 1990s saw widespread subnational debt crises in major developing countries. Runaway provincial debt in Mendoza and Buenos Aires was viewed as a major factor behind Argentina’s sovereign debt default in 2001. Brazil experienced two subnational debt crises following the early one in the 1980s. The 1995 Tequila crisis in Mexico exposed the vulnerability of subnational debt to the peso devaluation and led many Mexican subnationals into debt crisis. In Russia, at least 57 of 89 regional governments defaulted from 1998 to 2001. In India, many states experienced fiscal stress in the late 1990s to the early 2000s, with a rapid increase in fiscal deficits, debt, and contingent liabilities.
These crises led to reforms to strengthen regulatory frameworks for SNG debt financing. Some countries such as Peru established the framework in the early 2000s to pre-empt the fiscal risks of decentralization. Historically, in the US, the state debt crises in the 1840s led to major constitutional reforms regulating debt in many states. In France, a regulatory framework was put in place in the 1990s after uncontrolled SNG borrowing in the 1980s and episodes of insolvency in the early 1990s.

**Box 1: Fiscal Rules for SNG Debt Financing – Country Examples**

- **US**: states regulations (e.g., balanced budget requirement)
- **France**: various borrowing regulations and balanced budget rules
- **Brazil**: Fiscal Responsibility Law 2000
- **India**: States Fiscal Responsibility and Budget Management Acts, following 12th Finance Commission
- **Mexico**: Subnational borrowing framework 2000
- **Poland**: Public Finance Law, 2005
- **South Africa**: Municipal Finance Management Act, 2003
- **Turkey**: Various regulations since the early 2000s

Source: Liu and Waibel (2008) and authors' research

Brazil has substantially strengthened ex ante regulations in response to repeated subnational debt crises. The federal government bailed out subnational debtors in earlier crises, but the resolution of the third debt crisis was conditioned on states undertaking difficult fiscal and structural reforms. The avoidance of unconditional bailouts in 1997 was to resolve the moral hazard created by prior bailouts. The strengthened ex ante borrowing regulations were embedded in the debt restructuring agreements between 25 states and the federal government in 1997, sanctioned by legislation. The Fiscal Responsibility Law in 2000 consolidated various pieces of legislation into one unifying framework.

Compared with Brazil, subnational debt stress in Colombia was much less severe. But Colombia developed a borrowing framework, as defined by various pieces of legislation, including Law 358 in 1997, Law 617 in 2000, and the Fiscal Transparency and Responsibility Law in 2003. In India, after the state fiscal crises in the late 1990s, the 12th Finance Commission put forward recommendations on fiscal rules and targets, as well as incentives for states to comply with the rules and targets.

Liu and Waibel (2008, 2009) summarized several key elements in ex ante borrowing regulation across countries, which can be a useful reference for China. Box 2 provides borrowing rules for subnational governments in the United States.

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6. Statutory controls on subnational borrowing have always existed in Brazil—controls on new borrowing and on the total stock of debt, expressed as percentages of revenue. However, they had loopholes, and subnational governments were creative in evading them. The regulations were strengthened in the late 1990s, leading to the unifying framework in 2000.

7. For a review of Brazil debt crises and remedies, see Dillinger (2002). For a review of fiscal responsibility legislations in several Latin American countries, see Webb (2004).
**Golden Rule for Debt Financing**

Regulations in many countries specify that borrowing is allowed only for long-term public capital investments. Some European countries, such as Germany and the United Kingdom, have enacted fiscal requirements of a balanced budget net of public investment (the “golden rule”). Many states in the US have similar rules. This element recognizes that such borrowing is beneficial (and may be in the interest of future generations). A number of middle-income countries, such as Brazil, Colombia, India, Peru, Russia, and South Africa, have adopted the golden rule.\(^8\)

The fiscal deficit itself may not be a problem if borrowing finances capital investment and economic growth.\(^9\) However, in the 1990s SNG borrowed heavily to finance substantial operating deficits in countries such as Hungary, India, and Russia, leading to unsustainable debt paths. In India, much of the growth in fiscal deficits of states in the late 1990s was driven by borrowing to finance operating deficits; for example, at the height of crisis, in some states more than 70 percent of new borrowing was to refinance existing debt.

It is typical to permit short-term borrowing for working capital. However provisions should be established to provide a maximum amount of such short-term borrowing and to prevent the rollover of short-term borrowing in such a manner as to result in creating long-term borrowing for operating deficits.

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\(^8\) The fiscal responsibility legislation in Brazil tightly controls current expenditure and aims for positive primary balance. India’s 12th Finance Commission mandates that states eliminate revenue deficits (current expenditure exceeding total revenue), which implies that the borrowing is to finance capital expenditure only. The Colombian Fiscal Transparency and Responsibility Law (2003) specifies that the ratio of primary surplus over debt service be at least 100 percent. According to Peru’s Fiscal Decentralization Law (2004), article 24, and General Debt Law (2005), article 51, borrowing is solely to finance infrastructure projects. According to the Russian Budget Law (1998), in provisions relating to regional governments, current expenditure may not exceed total revenues and borrowing may be used only to finance investment expenditures. The South African constitution prohibits borrowing for consumption expenditure (South Africa National Treasury 2001: 192).

\(^9\) This statement assumes, however, that economic growth translates into increased capacity to service debt, which may not happen if a subnational government is unable to exploit its growing tax base. Then, borrowing can still provoke a fiscal crisis, even when the proceeds have been put to good use. Moreover some infrastructure projects may not have a direct correlation with economic growth.
Box 2: Borrowing Rules for Subnational Governments in the United States

As the US is a federal country, each state sets limits for itself and for its local governments. Rules vary by state. Following are some examples:

- Bonds must be for a public (not private) purpose; no guarantees of private debt are allowed.
- Only capital projects and cash flow borrowings specified by state laws may be financed.
- Voter approval is sometimes required (particularly if taxes are source of payment).
- Cash flow borrowing must be repaid in same fiscal year; often the amount is limited to a percentage of anticipated taxes or revenues.
- Debt limits are specified in laws/state constitutions to avoid excessive borrowing. Examples
  - Constitution of the State California: no local government shall incur any indebtedness or liability in any manner or for any purpose exceeding in any year the income and revenue provided for such year, without approval of two-thirds of the voters.
  - Constitution of the State of Virginia: No city shall issue any bonds or other interest bearing obligations which, including existing indebtedness, shall at any time exceed 10% of the assessed value of real estate subject to taxation in the city, as shown in the last preceding assessment for taxes.
- “Special funds” exception
  - Often, debt limits do not apply to bonds payable from a “special fund,” such as a fund to which the revenues of a water system or a special tax (i.e., a tax to fund a specific service, such as ambulance service) are deposited.
  - Most revenue bonds fall under this exception.

Fund accounting

- States and local governments use “fund accounting” method in order to take advantage of the special funds exception.
- Governmental accounting standards (GAAP) are established by the Governmental Accounting Standards Board. (www.gasb.org)
- Municipal accounting is not uniform. Each state determines what accounting standards they and their local governments will use. Not all use GASB standards.

Generally, bonds issued in violation of a state constitution or laws are void – issuer may not re-pay.

- A legal opinion from a private lawyer or law firm that specializes in municipal bonds (a “municipal bond lawyer”) is necessary in order for bonds to be accepted by investors.
- Some states also require a legal opinion from its attorney general or review by a court.
- A legal opinion typically says the bonds are valid under state law; legal and binding obligations of the issuer; payable from a particular source of funds; and interest is not subject to federal (or state) income taxation – if applicable.

Additional Restraints on State and Local Governments

- “Government in the Sunshine” (also called “open meetings laws”)  
  - All meetings of a majority of the members of a governing body of an issuer must be open to the public.
  - Advance notice (usually at least a week) must be given of the meeting and its agenda.
- Government officials may not vote on any matter in which they have any financial interest. If they do, the official action authorized is void. Often, there are also criminal penalties for public officials who violate this law.

Source: Haines (2009)
**Limits on Key Fiscal Indicators**

Common across regulations in countries is limits placed on key fiscal variables, such as fiscal deficit, primary deficit, debt service ratios, debt capacity ratio, and ceilings on guarantees.

These limits are an attempt to ensure the fiscal sustainability of SNG. However there are two primary questions in developing fiscal targets. First, which is [are] the most critical ratio[s] for assessing fiscal sustainability of subnational governments? The usual candidates are: debt stock-to-SGDP (subnational GDP) ratio, debt stock-to-total revenue ratio, debt service-to-total revenue, and budget deficit-to-SGDP ratio; and how these indicators should be evaluated. Second, what are the standard thresholds for each of these ratios that are normally used in assessing whether a sub-national’s fiscal framework is sustainable or not and are they appropriate in a particular environment?

Basically, the determination of fiscal sustainability at the subnational level is a country-specific exercise and depends on existing intergovernmental fiscal regime, subnational borrowing laws and political factors (Ianchovichina, Liu, and Nagarajan. 2007). Annex 1 provides a more detailed analysis of these two questions. Below are country examples in regulating fiscal indicators.

**Brazil:** the debt restructuring agreements between the federal government and the states established a comprehensive list of fiscal targets—debt-to-revenue ratio, primary balance, personnel spending as share of total spending, own-source revenue growth, and investment ceilings—as well as a list of state-owned enterprises or banks to be privatized or concessioned.

**Colombia:** Law 358 (1997), Law 617 (2000), Law 819 (2003) developed a traffic-light system – indebtedness alert signals – to regulate subnational borrowing. Subnational governments rated in the red-light zone are prohibited from borrowing, and those in the green-light zone are permitted to borrow. The red-light zone is defined as the ratio of interest to operational savings (liquidity indicator) greater than 40 percent and the ratio of debt stock over current revenues (solvency indicator) greater than 80 percent. A third indicator relates the primary surplus to debt service.

**India:** As recommended by the 12th Finance Commission, fiscal responsibility legislation is mandatory for all states, with the revenue deficit to be eliminated and the fiscal deficit to be reduced to 3 percent of gross state domestic product by fiscal year 2009. A state with a debt service ratio exceeding 20 percent is classified as having a debt stress status, triggering the central government’s close monitoring of additional borrowing by the state.

**Poland:** Public Finance Law (2005) regulates debt limitations for local governments, with the intent to meet EU standards of total public debt including local government debt no more than 60 percent of GDP. A local government debt is no more than 60 percent of its total revenue and debt service to 15 percent of its total revenue. In the event that local government debt exceeds 55 percent of total revenue, the ratio of debt service to total revenue has to be reduced to no more than 12 percent. For guarantees provided by the local government to municipal companies and other public entities, the variable of debt service needs to include guarantee payments for a given

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10. Revenue deficit is the amount of current expenditure exceeding total revenue.
budget year even if the guarantees are not recalled. All arrears are also included in the debt limitations.

**France**: Key elements of prudential rules regulating debt, liquidity and contingent liabilities include: new borrowings must fund capital investments; debt payments are compulsory expenditures and must be fully budgeted; annual debt service including those paid on loans guaranteed \( \leq 50 \) percent of SNG operating revenue; no single borrower may benefit from a guarantee exceeding 5 percent of operating revenue of the SNG; guarantees may not exceed 50 percent of the principal of the debt of the entity that is guaranteed; SNGs are required to deposit cash with the central government, which carries out all payments subject to a legality control. In addition to the borrowing framework, SNG must also follow accounting and budget rules. These rules include balanced budget rules requiring that both operating and capital accounts be balanced and annual debt service be covered by SNG own revenues (excluding new borrowing).

**Medium Term Fiscal Framework**

Several regulatory frameworks, such as those in Brazil, Colombia, and Peru, include procedural requirements that subnational governments establish a medium-term fiscal framework and a transparent budgetary process. This requirement is intended to ensure that fiscal accounts move within a sustainable debt path and that fiscal adjustment takes a medium-term approach to better respond to shocks and differing trajectories for key macroeconomic variables that affect subnational finance. The transparent budgetary process affords debates by executive and legislative branches on spending priorities, funding sources, and required fiscal adjustments. According to Peru Fiscal Decentralization Law (2004), regional and local governments are required to prepare detailed multiyear budgetary frameworks that are consistent with the national government’s multiyear budget framework.

**Fiscal Transparency**

Fiscal transparency is increasingly becoming an integrated part of fiscal frameworks. Transparency includes having an independent audit of subnational financial accounts, making periodic public disclosures of key fiscal data, exposing hidden liabilities, and moving off-budget liabilities on budget. In India, several reforming states have started to move the off-budget liabilities onto the budget and have established the measure of consolidated fiscal deficit beyond the conventional fiscal deficit; the reported fiscal deficit does not capture the financing deficit of large public sector undertakings, which implicitly are states’ liabilities.

In Brazil, the accrual accounting method for all levels of the government eliminates an important source of hidden liabilities: arrears. Moreover, article 48 of Brazil’s Fiscal Responsibility Law (2000) enshrines fiscal transparency as a key component of the new framework. Proposals, laws, and accounts are to be widely distributed, including through the use of electronic media (all reports are made available on the Web site of the Ministry of the Treasury). Article 54 requires that all levels of governments publish a quarterly fiscal management report that contains the major fiscal variables and indicates compliance with fiscal targets. Pursuant to article 57, this report is to be certified by the audit courts.
III. Ex Post Insolvency System

Ex post regulation—that is, subnational insolvency mechanism—deals with insolvent subnational governments.\(^{11}\) Notwithstanding fiscal rules for ex ante control, defaults can happen owing, *inter alia*, to a subnational’s own fiscal mismanagement or macroeconomic and exogenous shocks. A well-designed insolvency mechanism has multiple objectives:

i) Enforcing hard budget constraints on subnational governments;

ii) Permitting an insolvent subnational government to maintain essential services while restructuring its debts. Subnational governments perform public functions, and often SNG cannot be liquidated and dissolved like private corporations. Therefore reorganization is the essence of resolving SNG insolvency.

iii) Helping the subnational government maintain essential services, restore financial health and reenter the financial market.

The need for a collective framework for resolving debt claims is driven by conflicts between creditors and debtor, and among creditors. Individual creditors often demand preferential treatment and threaten to derail debt restructurings voluntarily negotiated between a majority of creditors and the subnational debtor (the so-called holdout problem).\(^{12}\) Creditors’ remedies under contract law (instead of insolvency mechanisms) are effective to enforce discrete unpaid obligations, but they fail if there is a general inability to pay. Individual ad hoc negotiations are costly, impracticable, and harmful to the interests of a majority of creditors. The holdout problem is not as serious if debts are concentrated in a few banks. However, a collective framework for insolvency restructuring takes on more importance as the subnational bond markets develop—with thousands of creditors.

In the absence of a clearly-defined framework for insolvency, subnational governments may adjust debts in negotiations with creditors or repudiate their obligations. As the experiences of the United States, Hungary, and South Africa show, ad-hoc debt restructurings are complex. Interests of the subnational government, which is responsible for maintaining essential minimum services, and those of creditors, who insist on fulfillment of contractual promises, diverge. Oftentimes, reconciliation through a voluntary bargaining process proves elusive.

Below are some key design considerations concerning insolvency procedures—namely, the fundamental differences between public and private insolvency, the choices between judicial or administrative approaches, and the operation of the insolvency procedure itself (Liu and Waibel, 2009). The central question is the resolution of the differing interests between creditors and the insolvent subnational borrower.

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\(^{11}\) It is useful to note that the boundary between ex ante regulation and ex post insolvency is not as clear cut. Webb (2004) included transfer intercepts and lender control mechanism as part of ex post consequences, this chapter focuses on the insolvency proceedings themselves.

\(^{12}\) The inability to compel holdouts to cooperate in a negotiated compromise motivated the passage of Chapter 9 of the U.S. Bankruptcy Code (McConnell and Picker 1993).
It should be pointed out that China has taken important steps in restructuring subnational debt obligations. One example is the restructuring of rural school debt in transition from debt to grant financing – the design for debt restructuring has adhered to the principles of avoiding moral hazard, burden sharing by the central, provincial and local governments, and a clear framework with explicit criteria and rules.

**Comparing Public and Private Corporate Insolvency**

The public nature of the services provided by governments explains the fundamental difference between public insolvency and the bankruptcy of a private corporation. This leads to the basic tension between protecting creditors’ rights and maintaining essential public services. Creditors’ remedies against defaulting subnationals, as opposed to corporations, are narrower, leading to greater moral hazard (strategic defaults). Whereas a corporation is able to self-dissolve, this route is barred for subnational governments. When a private corporation goes bankrupt, all assets of the corporation are potentially subject to attachment. By contrast, the ability of creditors to attach assets of subnational governments is greatly restrained in many countries. In the case of subnational insolvency, the insolvency mechanism is generally focused on reorganization, not liquidation of assets. The typical subnational has some taxation authority.

When Hungary deliberated its subnational insolvency mechanism, it was recognized that the country’s corporate bankruptcy law, in force since the late 1980s, was inapplicable to subnational borrowers. In the United States, a prominent judicial doctrine holds that only “proprietary property”, defined by the U.S Supreme Court as “held in (the municipality’s) own right for profit or as a source of revenue not charged with any public trust or use”\(^\text{13}\) is attachable. As a result, the backstop of private creditors’ rights – the right of subnational creditors to seize the property of the debtor – is often unavailable or extremely limited.\(^\text{14}\)

The public nature of the debtor may justify curtailing creditors’ valid private law claims. Creditors will insist that all valid debts be honored and repaid. Ex ante, the subnational entity may pledge assets for financial resources; ex post, it will argue that many assets cannot be used for the satisfaction of creditors as they serve a public purpose. The tension between creditor rights and subnational debtor’s inability to pay is here to stay. A subnational insolvency framework provides guidance on the priority of settling competing creditor claims.

**Judicial vs. Administrative Approaches**

There are primarily two approaches to the administration of subnational insolvency: the judicial and the administrative. Various hybrids also exist. Judicial procedures establish the judiciary as the controlling entity of the process. Courts make key decisions to guide the restructuring process, including when and how a municipal insolvency is triggered, and a priority structure for allocating credits among competing claims and which services are essential and to be

\(^{13}\) Variants of such limitations on attachment of subnational assets are found in many countries. An early example is a Swiss court judgment of December 15, 1881. Speaking to Winterthur’s financial distress, the court held that taxation power and those buildings serving a public purpose were outside bankruptcy (Meili, 1885). Fasching (1983, 84) described the general principle of law that private rights against public bodies may be enforced as long as the existence and operation of the public entity is not endangered.

\(^{14}\) For a more detailed discussion on the case of US, see McConnell and Picker (1993).
Because debt discharge is highly complex, the judicial approach has the advantage of neutralizing political pressures during the restructuring. However, because mandates for budgetary matters lie with the executive and legislature in many countries, the courts’ ability to influence fiscal adjustment of subnational entities is extremely limited. Administrative interventions, by contrast, usually allow a higher level of government to intervene and control the entity concerned, temporarily taking direct political responsibility for many aspects of financial management.

The choice of approach varies across countries, depending on the history, political and economic structure, competency of the judiciary and motivation for establishing an insolvency mechanism. In Hungary, a desire to neutralize political pressure for bailing out insolvent subnational governments favored the judicial approach. South Africa’s legal framework for municipal insolvency is a hybrid, blending administrative intervention with the role of courts in deciding debt restructuring and discharge. It uses sequential administrative interventions in the event of municipal financial distress: an early-warning system consisting of various indicators, intervention by provincial governments, and then intervention by the central government. Meanwhile, municipalities in South Africa can appeal to courts for staying, restructuring, or discharging debt. In Brazil, after having bailed out insolvent subnational entities in the two earlier debt crises, the federal government chose an administrative approach in dealing with the third debt crisis. The central government intervened directly in fiscal and debt adjustment, imposing difficult structural reforms to tackle the root causes of fiscal insolvency, instilled fiscal transparency, and essentially imposed a fiscal and debt adjustment package that was based on reform conditions.

The United States has both judicial and administrative approaches. In response to widespread municipal defaults during the Great Depression, the U.S. Congress adopted a municipal insolvency law in 1937, known today as Chapter 9 of the U.S. Bankruptcy Code. The primary aim of this legislation was to deal with the holdout problem. The mandamus writ was recognized as useful for enforcing unpaid discrete obligations; it is ineffective if the subnational is generally unable to pay (McConnell and Picker, 1993).

Chapter 9 is a debt restructuring mechanism for political subdivisions and agencies of U.S. states. It provides the procedural machinery whereby a debt restructuring plan acceptable to a majority of creditors can become binding on a dissenting minority. Only debtors may file for Chapter 9, therefore SNGs cannot be forced into Chapter 9 by creditors. Many states have

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15 See Dillinger (2002) for a review of state debt crises in Brazil and debt restructuring packages.
16 Bankruptcy Act of 1938 (“Chandler Act”), 50 Stat. 654 (1937), amending the 1898 U.S. Bankruptcy Act. The 1938 act was the first legislation for municipal bankruptcy in the world, even though other countries had contemplated the introduction of similar mechanisms—for example, Switzerland did so in the second half of the 19th century (Meili 1885). In 1934, the U.S. Supreme Court had declared a previous version of this legislation unconstitutional (see Ashton v. Cameron County Water Improvement District No. One, 298 U.S. 513).
17 The *mandamus* is a court order obliging public officials to take a certain course of action. For an excellent account on the mandamus and its motivation for Chapter 9, see McConnell and Picker (1993).
18 The enactment of the statute was one more step in a series of regulatory reforms on subnational borrowing since the first subnational debt crisis in the early 1840s. After the 1840s crisis, 12 states adopted new constitutions, and 11 of the 12 required that the state legislature adopt new procedures for authorizing state borrowing. Other reforms at the time included opening access for infrastructure finance and development and eliminating taxless finance (Wallis 2004).
adopted their own frameworks for dealing with municipal financial distress, for two reasons. First, municipalities are political subdivisions of the states. Second, state consent is a precondition for municipalities to file for Chapter 9 in federal court. That requirement is one instance of how the U.S. constitution reserves control over municipalities to states. Moreover, federal courts may not exercise jurisdiction over policy choices and budget priorities of the debtor. No uniform approach exists across states: 21 of the 50 states give blanket consent, 3 states attach important conditions, and 27 states grant permission on a case-by-case basis (see Laughlin 2005).

In France, by law, SNG cannot go bankrupt and public assets cannot be pledged as collateral. If a subnational government is insolvent, the central government will intervene, enforcing fiscal adjustment and facilitating debt negotiations among creditors and the borrower. The central government does not guarantee SNG borrowing, but may provide exceptional assistance. However, the amount of assistance set aside by the central government is extremely small, and there are no expectations of state bailouts. SNG accounts are checked by the Prefect and CRC. SNGs may be placed under the control of the Prefect for several reasons including failures to present a balanced budget, deficit exceeding 5 percent of operating revenues, and failures to make provisions in the budget for compulsory expenditures including debt services. The insolvency resolution system is based on administrative practice rather than a formal code. The lack of clarity on the rights of creditors and the lack of an established priority structure for claims can lead to uncertainty.

**Insolvency Procedure**

Judicial or administrative, any insolvency mechanism contains three central elements: definition of the insolvency trigger for the procedure, fiscal adjustment by the debtor to bring spending in line with revenues and borrowing in line with the capacity to service debt, and negotiations between debtor and creditors to restructure debt obligations and potential relief.

Specific legal definitions serve as procedural triggers for initiating insolvency proceedings. While the United States and Hungary define *insolvency* as the inability to pay, South Africa chose one set of triggers for serious financial problems and another for persistent material breach of financial commitments. In all three countries, the bankruptcy code empowers the bankruptcy court to dismiss petitions not filed in good faith. Because bankruptcy procedures have the power to discharge debt, a subnational entity may file purely for the purpose of evading debt obligations or other contractual disputes that reflect unwillingness to pay rather than

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19 Several states require that SNGs be subject to state administrative procedures before the state will consent to allow the SNG to use Chapter 9, e.g. Pennsylvania’s department of Community Affairs.
20 New York City’s insolvency in 1975 and Ohio’s early-warning system monitoring of the financial health of municipalities are two prominent examples of direct state involvement in resolving financial distress.
22 Liu and Waibel (2009) discuss in details on insolvency procedures of selected countries.
23 In Chapter 9 of the U.S. Bankruptcy Code, *subnational insolvency* is defined as the debtor either (a) currently not paying its debts as they become due, unless such debts are the subject of a bona fide dispute, or (b) not being able to pay its debts as they become due. According to Hungary’s 1996 Law on Municipal Debt Adjustment, the two central triggers occur (a) if the debtor has neither disputed nor paid an invoice sent by a creditor within 60 days of receipt or of date due if the due date is later or (b) if the debtor has not paid a recognized debt within 60 days of date due.
inability to pay. The U.S. Bankruptcy Code erects obstacles to municipal filing beyond those faced by private debtors, thereby discouraging strategic municipal bankruptcy filings.\footnote{24}

Fiscal adjustment and consolidation are preconditions for financial workouts. Often a subnational government’s own fiscal mismanagement is the root cause of insolvency. Even when subnational insolvency is triggered by macroeconomic shocks, such as a sharp rise in real interest rates through a currency crisis, fiscal adjustment is inherent to any insolvency procedures.

Similar to fiscal adjustment by central governments, real interest rates, economic growth of the subnational economy, and the SNG’s primary balance determine subnational debt sustainability. Subnational fiscal adjustment qualitatively differs from national fiscal adjustment (Ianchovichina, Liu, and Nagarajan, 2007). The former is complicated by the respective legislative mandates of central vis-à-vis subnational governments, the intergovernmental fiscal system and the lawful authority to generate its own revenues. Unable to issue currency, SNG cannot use seigniorage finance. They cannot freely adjust their primary balance because of legal constraints on raising their own revenue, dependence on central government transfers, and central government influences on key expenditure items such as wages and pensions. If public sector banks dominate lending, lending rates could be subsidized, bank lending to subnational entities could exceed the statutory requirements, and credit risk concerns could be compromised. Many policies that affect economic growth and fiscal health of the subnational economy are designed largely or exclusively by the central government.

Even in a decentralized system such as that in the United States, where subnational governments have broad freedom to control expenditures, raise revenues, influence their local economic growth, and affect the interest rate spread (which links to the creditworthiness of each subnational entity) in a competitive capital market, fiscal adjustment often requires difficult political choices of cutting expenditure and raising revenues.

Debt restructuring lies at the heart of any insolvency framework. In administrative interventions, the higher level of government often restructures the subnational’s debt obligations into longer-term debt instruments, conditioned on SNG fiscal reforms. In the case of New York City, the Municipal Assistance Corporation was created to issue longer-term bonds of the state to repay maturing short-term obligations of the city. Dedicated city taxes were applied to debt services.\footnote{25} In Brazil, the 1997 debt agreements between the federal government and the 25 states, though strengthening ex ante regulations, might at the same time be seen as an ex post intervention, because the agreements were imposed on a case-by-case basis as a condition of debt restructuring.

While administrative approaches tend to focus on debt restructuring, independent courts are viewed as best equipped to discharge debt. Debt discharge is a major departure from the

\footnote{24}Only municipalities face a statutory requirement of insolvency. Section 109(c) imposes a procedural bar that is unique to Chapter 9 debtors: It requires pre-filing efforts by the municipal debtor to work out its financial difficulties. The debtor must have reached agreement toward a plan or must have failed to do so despite good faith negotiations, or such negotiation must be “impracticable.” Also, according to section 109(c)(2), municipalities need state authorization to file for bankruptcy.

\footnote{25}To make the MAC bonds more attractive, the state legislature declared the stock transfer tax and the city sales tax to be state tax, and directed revenues from these be transferred to a fund under the MAC management and applied to the debt service and administration cost (Bailey, 1984).
principle that contracts ought to be fulfilled. A mature judicial mechanism is well placed to ensure that discharges are fair and equitable. In South Africa, for example, the municipality needs to go to the court for a discharge. Administrative procedures, on the other hand, tend to lack the power to discharge debt.

**Control and Monitoring**

Control and monitoring mechanisms can substantially reduce the risk of insolvency. Below are two examples: France, a unitary country, and the State of Ohio in the United States, a federal system where local governments are political subdivisions of states, not of the federal government.

**France**: Notwithstanding considerable fiscal autonomy of SNG, the state exercises strong supervision and monitoring of SNG financial accounts through two institutions: the Prefect and the Regional Chamber of Accounts “chambres regionales des comptes” (CRC). In the case of a non-balanced budget, late approval or non-budgeted mandatory expenses (such as debt service), the Prefect (and every interested person) can refer the case to CRC. If the SNG does not follow the statement made by the CRC, the Prefect can implement a budget. The CRC also exercised financial supervision.

The key element of internal control is to separate the decision making, embodied in the president of the local government council, who contracts expenditure, from the actual payments made by the public accountant, who is part of the central government. This means that there are two sets of departmental accounts which must tally.

Public accountants are subject to two kinds of controls. First, inspections by the Inspection Générale des Finances focus on ensuring compliance with laws and regulations and against fraud; in performing such assignments, Inspection des Finances members enjoy special powers (access to all necessary documents, in particular to the accounts of all public accountants, and the right to suspend accountants temporarily in cases of fraud); such inspections necessarily lead to give an assessment of local public finances management. Second, the local CRC evaluates the accounts. The CRC also is responsible for conducting audits on management quality and regularity, on the prudent use of resources, and on the effectiveness of actions taken to meet the objectives established by the local government.

**State of Ohio, US**: The Fiscal Watch Program acts as an early warning system to prevent to local governments, including counties, municipalities, school districts, state universities and colleges, from experiencing fiscal distress. It is implemented by the Office of Auditor of State. A local government that is approaching a state of fiscal emergency as defined by specific financial indicators will be placed under the fiscal watch program. The fiscal watch continues to be in effect until the auditor determines that the conditions are no longer present and cancels the watch, or until the auditor determines that a state of fiscal emergency exists.

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26 In the United States, the Contracts Clause of the US Constitution (Article I. 10.1) puts the principle of contract as sunt servanda into constitutional form.

27 See Liu, Gaillard, and Waibel (2010).

28 [http://www.auditor.state.oh.us/lgs/Publications/GeneralPublications/IntroToFiscalEmergency.pdf](http://www.auditor.state.oh.us/lgs/Publications/GeneralPublications/IntroToFiscalEmergency.pdf)
As an early warning system, the fiscal watch program stimulates local governments to improve their fiscal management. After receiving the early signal and warning, local governments began to reduce expenditure and increase cash reserve before the fiscal year-end.

Local governments and other entities will be placed under the fiscal emergency program, when their fiscal indicators meet the regulatory criteria. A commission will be formed for a local government under the fiscal emergency program, to assist in preparing and implementing a long-term financial recovery plan accepted by both the local government and the commission. The Auditor of State’s Office serves as financial supervisor to the commission and provides technical support and advice. The Auditor of State’s Office also examines the existing system of governmental accounting and reporting as well as identifies the improvements needed to be made.

The commission terminates its activity under two conditions: (1) the local government is no longer experiencing the fiscal emergency conditions that prompted the initial declaration and has made the necessary improvements in its accounting and reporting system; or (2) the local government has a plan in place, which is intended to eliminate fiscal emergency condition and satisfy the improvements within two years. If the fiscal emergency is terminated prior to these conditions being met, the Auditor of State is required to monitor the progress of the government to insure full implementation of an effective accounting system and the complete elimination of the emergency conditions.

IV. Regulating UDIC

Since the mid-1990s, UDIC have played a vital role in the rapid transformation of China urban landscape in the last decades. UDIC will continue to be important with accelerating urbanization and large flow of rural residents into urban areas, which demand large-scale infrastructure investments and developing urban centers throughout China.

A key policy challenge is to manage the substantial fiscal risks of UDIC while continuing to harness the strength of UDIC for the development of infrastructure.

The fiscal risks of UDIC are not unique to China. In the early to mid 19th century, many U.S. states aggressively sought debt financing of their large infrastructure projects. Several states owned public banks that participated in financing of infrastructure projects. Some infrastructure projects were developed by public enterprises created and owned by states; others were financed by states but owned and operated by private entities. States experimented with a variety of ways of financing investments. Some used taxless finance, which did not require raising taxes immediately but resulted in taxpayers assuming contingent liabilities (Wallis, 2004).

The state debt crisis of the 1840s led many US states to adopt state constitutional reforms to address the contingent liabilities of off-budget infrastructure companies and their debt financing. Today, special purpose vehicles, public utility companies, along with private companies, carry out infrastructure investments and services, under well developed regulatory frameworks and corporate governance structure.
SPV created by states and municipalities are vital for infrastructure development in the United States. Examples of the SPV include New York-New Jersey Port Authority, Triborough Bridge and Tunnel Authority, Metropolitan Washington Airports Authority, Massachusetts Turnpike Authority, Washington Suburban Sanitation Commission, and numerous municipal utility authorities. These SPV are separate legal entities from the SNG that create them, typically for a single purpose or enterprise, with revenues derived from the enterprise or project. SPV operate under a set of regulations and have a low rate of debt default.

*Ex Ante Borrowing Rules*

China can consider letting UDIC issue revenue bonds and borrow from financial institutions. Ex ante borrowing rules can be established for regulating UDIC borrowing. TA UDIC may be wholly or partially owned or controlled by a SNG, and may provide essential public services. Therefore it is important to regulate the financial operations of UDIC so that the negative impacts of potential UDIC insolvency on the SNG budget and the delivery of services are minimized.

UDIC in China has some similar features as those of SPV. International experiences point to key elements of borrowing rules for SPV, *inter alia*:

- Bonds/bank borrowing must be for a public (not private) purpose and finance capital projects related to the stated purpose of the SPV;

- Bonds/bank borrowing are payable from a “special fund,” such as a fund to which revenues of a water system or special tax are deposited to avoid the funds being diverted to the general budget or commingled in such manner as to lose their separate identity;

- Operating revenue must be maintained at a ratio of xx% of debt service; and rates/tariffs for services shall be established to maintain such ratio, i.e. rate covenant. The rate depends on the nature of the sector and enterprise. For example, a typical rate covenant in the United States for a water/sewer utility is to set rates sufficient to produce net revenues equal to at least 1.25 times total annual debt service;

- Compliance with historical and projected debt service coverage ratios as a condition to the issuance of additional debt;

- Restrictions on the sale of property related to the operation of the enterprise to establish that the remaining property is sufficient to meet the obligations of the SPV;

- SPV follows sound accounting standards (GAAP);

- SPV would need to disclose its annual financial statements which are independently audited;

- A legal opinion needs to be issued for each bond issuance that the bonds are valid under the government regulations, and the issuer has legal and binding obligations to service the

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29 Although SNG influence may be maintained through the appointment of the members of the Boards of Directors.
debt payable from a particular source of funds and to comply with the terms and conditions of the issuance of the bonds, e.g. rate covenant.

In addition to the above regulation on borrowers, regulations can be imposed on the lenders to contain the risks of non-performing loans from this sector. Lenders must set aside risk-adjusted capital reserves with higher reserves required for less creditworthy SPV. If an SPV has a lower credit assessment, the required capital reserve could be raised to discourage lending to such SPV.

**Guarantees**

Guarantees can play a useful role in bridging financing for projects that have public policy justifications, or the underlying economic values are not fully recognized by markets. However, there is an incentive for risky borrowers to seek government guarantees, and for inter-related public entities to support one another in ways that violate arm’s-length standards and obfuscate the financial risks that are being assumed. Box 3 summarizes how rating agencies treat these contingent liabilities.

**Box 3: Credit Ratings of Off-Budget Debt Liabilities**

<table>
<thead>
<tr>
<th>All major international rating agencies have a strong emphasis on off-balance sheet. S&amp;P defines off-balance-sheet liabilities to include the total debt from all public sector enterprises (e.g., banks, utilities, and housing companies) and other contingent obligations such as social obligations, public private partnerships and bailout of private companies. The subnational government is evaluated on its ability to continuously and carefully monitor the financial health and profitability of all public sector enterprises, as well as the clarity it provides on the likelihood that it will be called upon to honor its guarantee to these enterprises.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Moody’s methodology, contingent liabilities (known as “indirect risks”) make up a distinct component of the “debt profile” in the rating criteria, separate from the “direct debt” of the subnational government. Moody’s reviews those liabilities that may not be consolidated in the financial statement of a subnational government, such as guarantees issued by the subnational government, debt obligations of majority-owned enterprises even not explicitly guaranteed by the subnational government, and public private partnerships.</td>
</tr>
<tr>
<td>Fitch, too, places a lot of emphasis on the importance of managing “indirect risks”. It considers lack of information on indirect risk a negative credit factor. Indeed, Fitch uses different approaches to try to gauge the seriousness of the off-balance-sheet liabilities such as off-balance-sheet project financing, lease obligations, debt guarantees, and equity interests and liabilities in utilities, businesses and banks. Fitch tracks past occurrences of the subnational government assuming the debt of agencies and companies; large unexpected transfers to companies and agencies; large transfers from companies to the subnational government (which may imply financial dependency); and the importance the services provided to the residents by certain companies.</td>
</tr>
</tbody>
</table>

Source: Liu and Tan (2009)
The risks of guarantees can be regulated while guarantees’ usefulness retained. Some international experiences show that the regulations can include:

- Private companies may be prohibited from getting such guarantees.
- Limiting the scope of guarantees for municipal enterprises. Take the example of France, annual debt charges paid by the SNG itself and paid on loans guaranteed by SNG may not exceed 50% of SNG operating revenue, no single borrower may benefit from a guarantee exceeding 5 percent of operating revenue of the SNG, and guarantees may not exceed 50 percent of the principal of the debt of the entity that is guaranteed. Poland has a stricter rule that guarantees provided to a municipal enterprise by a local government are counted as part of debt service of the local government whose total debt service (principal + interest + guaranteed debt service) cannot exceed 15% of its revenues.
- Guarantees, all other direct and indirect debt liabilities, should be an explicit part of SNG budget and financial statements, fully disclosed to the public.

**Revenue Bonds**

UDIC in China have already been issuing bonds in addition to borrowing from financial institutions. Figure 1 presents subnational bonds issued by UDIC and other entities of subnational governments in China from 2000-2010(Q1).³⁰

![Figure 1: China Sub-Sovereign Bond Issuing 2000-2010 (Q1)](image)

³⁰ Bonds were also issued before 2000, but data coverage is incomplete, hence not included here. Data on bonds issued with less than three year maturity are incomplete.
A key concern is the contingent liabilities generated by the outstanding debt. To reduce and ring-fence fiscal risks, in addition to the ax ante borrowing rules and guarantee regulation discussed above, China could develop regulatory frameworks for UDIV and SPV to issue revenue bonds. In contrast to the general obligation bonds of SNG, revenue bonds are secured by the revenue stream generated by a specific project that the debt is to finance. Revenue bonds reinforce self-sustaining finance, because the repayment of principal and interest is made entirely from the revenues generated from the project financed by the bonds. These bonds allow the market to play a central role in enforcing debt limitation, pricing risks, and matching the maturities of liabilities with the economic lives of assets. More important, revenue bonds affirm that sustainability is about the ability of the borrower to service the debt.

No financing structure has been of greater importance to the growth of the U.S. subnational debt market than revenue bonds. Of the $226.6 billion in long-term subnational bonds issued in the United States in 1999, about 70 percent ($156.4 billion) were revenue bonds; only 30 percent ($70.2 billion) were general obligation bonds (Maco 2001). In the United States, revenues bonds are outside the debt limits set by the states, but revenue bonds follow strict rules and have a low rate of debt default.

UDIC should establish “trusts” that receive the receipts of bond sales and bank loans and revenue streams. Proceeds are dedicated by law to infrastructure investment (or specified investment projects). A legal trustee is responsible for seeing that funds are not diverted for unauthorized purposes. Additionally revenues earmarked for debt repayment and are collected pursuant to the rate covenant shall also be deposited in a trust and be available exclusively for operating expenses and debt servicing.

Developing revenue bonds can be supported by complementary reforms. Tariff structures for infrastructure projects should be set based on sound regulatory frameworks. UDIC that go to the market to raise funds should be willing to undertake corporate governance reforms and allow their accounts to be audited independently. The financial strength is assessed through a credit rating system that assesses a borrower’s ability to pay debt.

**Insolvency of UDIC**

UDIC/SPV’s insolvency raises a particular challenge. In countries such as France, SNGs are not allowed to go bankrupt, but a company owned by the SNG would go through bankruptcy proceedings through the corporate bankruptcy code. In the United States, whether a municipal company can file Chapter 9 of the Bankruptcy Code will depend on the legal interpretation of the nature of the company and its relationship with the municipal government.

The key difference between UDIC/SPV and a private company is the public nature of the infrastructure services provided by UDIC/SPV; making UDIC/SPV insolvency more similar to SNG insolvency than that of a private corporation. When a private corporation goes bankrupt, all assets of the corporation are potentially subject to attachment. By contrast, the ability of creditors

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31 A general obligation bond is secured by a pledge of the issuer’s taxing power (limited or unlimited). General obligation bonds of local governments are paid from property taxes and other general fund revenues. A double-barreled bond is backed by a special tax or a specific source of revenue as well as by the full faith and credit of the issuer. A limited tax bond is secured by a pledge of a tax whose rate or amount is limited.
to attach assets of SNG is greatly restrained in many countries. When SNG becomes insolvent, the insolvency mechanism is generally a reorganization type, not liquidation of all assets.

As UDIC/SPV also share many features with a corporation. One option is that special provisions for UDIC/SPV can be developed under the existing corporate bankruptcy law in China. Another option is to develop a free-standing legislation for either an administrative or judicial mechanism. Both options need to provide a framework for debt restructuring to resolve conflicts between creditors and a UDIC/SPV as the debtor, while at the same time recognizing the quasi public nature of the UDIC/SPV and preserving the continued delivery of public services.

V. Strengthen Subnational Government Capacity in Managing Debt

Past subnational debt crises in developed and developing countries show that subnational insolvency can result from any of the following factors: mismanagement of a subnational’s fiscal accounts, such as a mismatch between borrowing and debt-service capacity; macroeconomic or exogenous shocks; and a risky profile of debt composition (e.g., short maturity, currency risks, and variable interest rates).

It is important for a subnational government to actively manage and monitor its debt portfolio, and liquidity and refinancing risks. Before the macroeconomic crisis in Mexico in the mid-1990s and in Russia in the late 1990s, subnational governments there had risky debt profiles—short maturities, high debt service ratios, and variable interest rates. The macroeconomic crisis exposed the vulnerability of fiscal positions of subnational governments and triggered widespread subnational debt crises.

Components of SNG Debt Management

Like national debt management, subnational debt management is the process of establishing and implementing a strategy for prudently managing the entity’s debt to meet its financing needs in a way that meets its risk objectives at the lowest cost and any other goals it may have set. The stock of debt, and new borrowings arising from budget and off-budget sources, should be managed in a manner that is consistent with the subnational government’s cost and risk preferences. Doing so entails using the following four-pillar framework, based on the World Bank’s Debt Management Performance Assessment Tool (World Bank 2007) and cross-country experiences drawn from countries such as Brazil and Colombia:

- Governance and strategy development. A sound governance framework refers to the legal and managerial structure that directs the operations of government debt managers. It includes legislation that defines goals and accountabilities, embodies the management framework, and covers the formulation and implementation of strategy, operational procedures, quality assurance practices, and reporting responsibilities. The strategy outlines the path by which the subnational’s debt-management objectives are operationalized in the medium term. Under this pillar, the subnational government establishes clear debt-management objectives

32 This section draws from Liu, Prasad, Rowe, and Zeikate (2009).
that are supported by a sound governance framework, a prudent cost–risk management strategy, an efficient organizational structure, appropriate management information systems, and a strong in-house risk management culture.

- **Coordination of borrowing with macro policies.** Coordinating borrowing with macro policies helps ensure that all portfolio-related transactions are consistent with the government’s fiscal and debt-sustainability strategy and are executed in an effective manner. Fiscal sustainability implies the government’s ability to maintain a certain set of fiscal and central government monetary policies without becoming insolvent. It also means that a government’s intertemporal budget constraint holds without explicit default on its debt. For policy purposes, it is useful to disentangle the growth and inflation effects on indebtedness as shown in equation (14.1):  

$$b_t - b_{t-1} = i_t - x_t - \frac{g_t}{(1+g_t)(1+\pi_t)} b_{t-1} - \frac{\pi_t}{(1+\pi_t)} b_{t-1}$$  

(14.1)

where \(b_t, i_t, \) and \(x_t\) are the outstanding public state debt, interest payments, and primary balance as shares of gross subnational domestic product (GSDP) in period \(t; g_t\) is the real annual growth rate; and \(\pi_t\) is the annual inflation rate. Under different scenarios, debt sustainability is assessed using

$$b_t = \frac{(1+r_t)}{(1+g_t)} b_{t-1} - x_t$$  

(14.2)

where \(r_t\) is the real interest rate, defined as \(r_t = [\ln(1+r_t)/\ln(1+\pi_t)]-1.\)

- **Borrowing and related activities.** Well-developed local capital markets are important because they provide stable funding sources in domestic currency for subnationals and allow liabilities to be more closely matched to the revenues that will service them. Well-developed domestic markets also enhance the efficiency and stability of financial intermediation, provide a broader range of assets, and facilitate better risk management. To the extent possible, debt issuance by subnationals should use market-based mechanisms, including competitive auctions, and syndications. Engaging in domestic borrowing activities that are transparent and predictable will provide the government with a mechanism with which to finance its expenditures in a cost-effective manner while minimizing risks. All borrowing activities should be in accordance with the government’s debt strategy.

- **Evaluation, debt recording, and reporting.** Establishing reporting procedures to ensure that the government’s debt managers are accountable for implementing the debt-management responsibilities delegated to them. Sound practice requires comprehensive debt management

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33. For countries allowing subnational governments to access external financing, equation (14.2) must be amended to include the exchange-rate effect.
34. International practice has shown that sovereigns can benefit by providing market participants and investors with details of borrowing plans and other market activities well in advance and then acting consistently when issuing new treasury bonds or undertaking other activities. Doing so leads to lower costs by providing investors with greater certainty, increasing liquidity, broadening the investor base, and creating a level playing field for investors.
systems to record, monitor, settle, and account effectively for all subnational government debt and debt-related transactions. The subnational government should report total debt outstanding to foster transparency and accountability.

*Liquidity and Refinancing Risk*

Any major macroeconomic shocks highlight the importance of managing liquidity and refinancing risks at both the central and subnational levels. The current global financial crisis reinforces such importance. As summarized by Liu and Tan (2009), all rating agencies now pay considerable attention to the subnational’s liquidity position, its cash management ability as well as the ability to service short-term debt in the context of various market risks. In the S&P methodology, for example, there is a strong focus on the minimum reserves that the subnational government maintains. These are defined in terms of their ability to meet not just expenditures but also debt service demands. Particular attention is given to the servicing of short-term variable-rate debts or bonds with bullet maturities. A heavy and consistent reliance on short-term debt or debt with irregular maturity is seen as a negative for the subnational’s credit standing. Moody’s, too, places a lot of emphasis on the subnational’s ability to manage short-term debt exposures. The subnational’s ability to service the debt is assessed in terms of both internal and external liquidity. Market access risk (i.e., the ability to access external liquidity in the market) is an important consideration in evaluating the subnational creditworthiness.

Debt profile analysis is also a critical part of the rating process in Fitch. Good credit standing requires a debt structure that has “moderate and predictable debt service, with minimal reliance on refinancing and no deferral of principal repayment” (Fitch, 2008, p.5). It considers it negative for subnational creditworthiness if scheduled debt repayment could not be met within the annual budget constraints and has to rely on future revenue growth, future economic growth, nonrecurring revenues, increased taxes or future legislative actions.

The emphasis on liquidity and debt management and off-balance-sheet liabilities has been reinforced by the ongoing financial crisis. Fitch’s category of “debt and indirect risk” has been expanded to become “debt, liquidity and indirect risk.” It highlights that balloon or bullet maturities or a large portion of short-term debt indicates refinancing risk. Its July 2008 update included two new debt indicators compared with the October 2006 guidelines: debt to current revenue and direct risk (direct debt plus indirect debt) to current revenue.

Moody’s updated rating methodology for subnational governments (2008) introduced a recalibration of the debt sub-factors. It altered the debt burden ratio to include in the numerator capital lease, debt issued by majority-owned enterprises, public-private partnerships and securitization transactions for which the government is or may become responsible. It also increased the weight assigned to this ratio and introduced a new criterion, the four-year trend, to better measure the underlying shifts in debt burden.

In its updated methodology, S&P (2009) introduced the valuation of use of derivative instruments. S&P will analyze the subnational entity’s objectives in entering these contracts (hedging, trading and cost reduction), the type of risk they are designed to mitigate, the extent of their use, management’s risk appetite, and the control procedures in place. In key ratios relating to liquidity and debt management, S&P also added liquid assets, in addition to cash, to measure the ability to finance debt service and other operating expenditures.
VI. Managing Fiscal Risks of Land Financing

Land assets are an important ingredient of subnational government finance in most developing countries. The estimated value of subnational-owned land assets in 2001 in China was at 25 trillion yuan – or roughly US$3.5 trillion (Peterson and Kaganova, 2010). Land values climbed steeply over the following years. Recent land transactions in Mumbai, Cairo, Cape Town and Istanbul each has generated revenues much greater than the prior annual capital spending of the city.

Many different instruments are used by governments to generate revenue from publicly owned land assets. Land may be sold outright or may be used as collateral for borrowing, a practice which has a long history of financing urban investment but also has exposed borrowers and lenders to significant risks. Today, land often is the most important public contribution to public-private joint ventures that build metro (subway) lines, airports, or other large infrastructure projects. Subnational public authorities frequently engage in public land development, with the intent of stimulating economic growth while also generating public revenues.

Beyond physical land, rights to more intensive land development—a higher Floor Space Index (FSI) or higher Floor Area Ratio (FAR)—may also be sold by public development agencies. These “excess density rights” in effect represent the publicly controlled share of privately held land, where the private owner’s freehold title allows the owner to develop land to the zoned maximum density, but the public sector retains control of higher-density development rights. These rights have economic value that can be sold by the public authority. Both the State of Maharashtra (India) and the City of Sao Paulo (Brazil) have sold FAR as a financing tool for urban development. In some countries, such as China or Ethiopia, the public sector retains all urban land ownership, but leases out land use and development (LUD) rights. These leasing rights typically are sold upfront in a capital transaction.

In moderation, the use of land-based revenues for capital finance should reduce overall capital financing risk. Land transactions of this kind complement borrowing by reducing the uncertainty surrounding future debt repayment capacity and the need to generate future revenue streams to meet future debt service.

However, land transactions for financing infrastructure also entail substantial fiscal risks. Managing these fiscal risks will be critical part of subnational financial management. This section deals with managing the fiscal risks of subnational land financing and transactions. It emphasizes ex ante prudent rules to reduce the risks. There are broader issues relating to land management, such as spatial planning, urban development, governance, and resettlement and safeguards, which are outside the scope of this paper.

Fiscal Risks of Land Financing

Cross-country experiences show several sources of fiscal risks from land financing.

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35 This section is based on Peterson and Kaganova (2010).
• **Failure to take into account the economic value of land.** Disregard for land values and revenue-generating capacity of land is often the result of a lack of qualified appraisers, non-transparent procedures in transferring land from public to private ownership, or corruption. However, economic distortions can be compounded by deliberate government policies that assign zero or artificially low values to land as an incentive to certain types of economic development.

• **Volatility of financing capital budgets.** Extreme reliance on land assets to finance urban capital budgets creates the risk of its own. Urban land values are highly volatile, especially in developing countries. Land prices can undergo swings of 50 percent in either direction, and in times of crisis even more, as demonstrated during the Asian financial crisis of the 1990s (Mera and Bertaud 2000) and again during the market collapse starting in 2008. Commercial land development by public entities can be an even higher-risk activity.

• **Land as collateral for subnational borrowing.** During the high-growth period of urban development, publicly owned land often has been used as collateral for borrowing to finance subnational public investment. In urban China during the 1990s and early 2000s, one of the most popular forms of financing for major infrastructure projects was to borrow against the future anticipated value of land after infrastructure was installed.

Borrowing based on the future appreciation of land values is risky, as land values decline in periods of economic stress, when it is most difficult to finance loan repayments. Systemic risks are heightened when the entire subnational sector relies heavily on land values to provide security for borrowing. This can be illustrated by two examples: the historical use of land-based municipal borrowing to finance the re-building of Paris in the 19th century, and the risks that eventually triggered a financial crisis that impacted the national finance system; and high default risk of Mello-Roos bonds in California.

China has taken steps to address the risk of subnational debt. In 2003 the government requires that banks making loans to municipalities appraise land collateral at its current market value rather than at its projected value after the completion of infrastructure investment. It also summarizes China’s use of local borrowing against anticipated land-value gains to finance major urban highway projects—a practice that the national government now has prohibited by regulation in order to limit local fiscal risks.

• **Diversion of proceeds from land-sale (or other municipal hard assets) to operating (non-capital) budget.** This risk is spread broadly, because subnational budgeting systems in many developing countries do not separate capital revenues from current revenues, and often do not restrict the use of revenues from land and property sales. A parallel risk arises from the fact that often land transactions are conducted by municipalities and public enterprises off-budget. In the absence of a special, urban-wide capital fund, individual bureaucratic agencies may capture the revenues generated from land sales and use them for agency-specific projects, without regard to overall investment priorities.

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36 For example, the city of Changsha (Hunan Province) contributed undeveloped land on both sides of a proposed ring road to the parastatal Ring Road Corporation. In its existing condition, without infrastructure or road access, the market value of most of this land was very limited. However, the Corporation was able to borrow US$350 million from China Development Bank and commercial banks for highway construction, based on the projected value that the land would have after completion of the ring road. Peterson 和 Kaganova (2010).
Although urban authorities can acquire new land at the urban fringe, and under certain conditions can acquire land through condemnation or eminent domain, urban land cannot be “produced” indefinitely. Sale or leasing of public land is not a “recurring” source of revenue. Thus, revenues from the sale or other disposition of public land should be treated as one-time revenues, with proceeds used to finance urban investment, or finance other one-time expenditures such as major institutional reforms.

Recurring revenues from public land development may be appropriately allocated to subnational operating budgets. In cases where public authorities develop commercial or industrial projects on public land, for example, development costs can be recaptured through annual rental charges and used to finance debt service charges through the operating budget. For economic efficiency and fiscal prudence, it is essential in these cases that all parts of a public development project, including land, be valued at market prices, and that the decision whether to publicly develop a site, sell land to the private sector for private development, or hold land in the public domain for future development and future increases in land value be made taking into account realistic market valuations.

- **Institutional and Behavioral Issues.** Examining these issues is beyond the scope of this paper, but they are worthy being highlighted. These issues include lack of financial accountability; public officials and institutions use public land for private, agency or employee gains, largely off-budget and off-balance sheet. In countries where municipal governments have full control over urban land, there is a fiscal incentive for governments to act like profit-maximizing land monopolists, by acquiring as much land as possible as cheaply as possible at the urban fringe, converting it into municipally owned urban land, and selling the land or land-use rights to developers at the highest price the market will bear. Altschuler and Gomez-Ibanez (1993) called attention to the fiscal incentives embedded in land-use controls in the United States. The aggressive tactics of some Chinese municipalities in acquiring land at the urban fringe and stockpiling it for future financial use have prompted the national government to impose several important regulatory restrictions. These include new compensation standards for municipal acquisition of rural land, and strict enforcement of regulations prohibiting municipalities from stockpiling excess land by designating it for future industrial development zones, without explicit higher-level authorization.

**Developing Regulatory Guidelines**

The above fiscal risks, together with the sheer size of potential land asset transactions, point to the importance of developing regulatory guidelines. There is no standard full-fledged regulatory framework yet for managing fiscal risks of land financing. Peterson and Kaganova (2010) put forward suggestions on some key elements of the regulations, which can serve as a starting point.

The regulatory framework for managing fiscal risks from land financing can draw analogy with the regulatory framework for debt financing. Table 1 below highlights the comparison.
Table 1: Comparison of Regulatory Frameworks: Key Elements

<table>
<thead>
<tr>
<th>Regulation on Borrowing</th>
<th>Applicability to Land Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose of Borrowing</strong></td>
<td>Asset sale proceeds must be used to finance investment. Exceptions could be allowed for key, one-time institutional reforms.</td>
</tr>
<tr>
<td>Long-term borrowing (i.e., borrowing for other than cash flow management within a fiscal year) must be used for capital investment.</td>
<td></td>
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<tr>
<td><strong>Foreign Exchange Regulation</strong></td>
<td>No direct financial parallel. Concern over petrodollars and international liquidity driving up prices, diverting the national patrimony away from local citizens.</td>
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<td>Unless permitted by law, SNG are prohibited from borrowing in foreign currency unless it is approved by the central government or guaranteed by the central government. SNG must meet debt limitation rules.</td>
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<td><strong>Fiscal Targets</strong></td>
<td>A partial parallel exists on the asset side of the balance sheet. It concerns “excessive” land asset sales or asset stripping. Regulations may require local authorities to certify that land (or other assets proposed for sale or transfer) is not needed for public purposes.</td>
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<td>A debt ceiling, prescribed in law, may be expressed in terms of the stock of debt, relative to SNG revenue or subnational GDP, or in terms of the debt service ratio.</td>
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<tr>
<td><strong>Supply Side Regulations</strong></td>
<td>Loans/bonds backed by land collateral may require special regulation, due to land price volatility and the dependence of land values on the completion of major infrastructure or development projects. Such rules could set minimum collateral/loan ratios for land-backed loans, and prescribe that for collateral purposes land must be valued at current market value.</td>
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<td>Banking regulations often require that banks maintain risk-adjusted capital ratios for different types of loans, where the capital ratio depends on the credit rating of SNG or the central bank’s mandated capital ratios for different types of loans, reflecting risk assessment.</td>
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<td><strong>Contingent Liabilities &amp; Inventories</strong></td>
<td>An inventory of municipally owned land, and land owned by different elements and subsidiaries of government, is basic to asset size and land management options. Similar to loan guarantees, risks are: land may be transferred to or from third parties in non-transparent ways, and may entangle financial relations between a municipality and its subsidiaries.</td>
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<td>Regulations require that SNG guarantees of third-party loans (e.g., municipal enterprises) be counted as debt for debt ceiling purposes, either at full value or risk adjusted. This requires a comprehensive inventory of municipal guarantees, and all other types of indirect debt.</td>
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<td><strong>Fiscal Transparency</strong></td>
<td>Land transactions commonly are conducted off-budget. Bringing them on-budget is a critical part of fiscal management in this area. All information on public land inventories, public land valuations, land sales, and land contributions to public-private joint ventures or subsidiaries should be conducted through standardized instruments, be reflected in the budget or its annexes and financial statements, and be a matter of public record.</td>
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<td>Subnational borrowing should be disclosed as part of budget, preferably through a separate capital budget that spells out capital revenue and financing sources and investment expenditures. Outstanding debt obligations should be spelled out on the liability side of the local government balance sheet, or in equivalent notes. Budgets, financial statements, and balance should be publicly reported.</td>
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<tr>
<td><strong>Collateral Restrictions</strong></td>
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<td>Loans/bonds backed by land collateral may require special regulation, due to land price volatility and the dependence of land values on the completion of major infrastructure or development projects. Such rules could set minimum collateral/loan ratios for land-backed loans, and prescribe that for collateral purposes land must be valued at current market value.</td>
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Regulations commonly identify public-purpose property that cannot be offered as collateral for municipal borrowing. A pledge law commonly requires registration of all property pledged as collateral so as to protect against “double pledging.” Regulations typically identify what types of publicly owned property can and cannot be alienated, either by sale or as collateral for loans. The registration of land and property collateral for land-management purposes also involves exactly the same information required for subnational debt regulation.

Other key elements of regulatory framework, which may not be directly linked to fiscal management, include:

- Prohibition on the transfer of surplus land to other government units or enterprises, private developers, or public-private partnerships, except on a fully disclosed contract basis.

- Establishing a land trust (as recommended for Egypt, or found in some US states) that could receive land sale proceeds, and ensuring that proceeds are used for infrastructure investment as prescribed by law, or as decided by appropriate authority with a metropolitan-wide perspective. This is one way to overcome the incentives that bureaucratic owners have to “internalize” land sale gains for the sole benefit of the agency.

- Market pricing of land, though there are counter arguments for incorporating subsidies under certain conditions. Clarifying guidelines identifying the specific situations in which below-market land pricing is permissible.

- Encouraging equal market access to all potential buyers of land, mandating auctions with adequate public advertising or similar competitive procedures for disposing of land assets, ensuring that these are administered to encourage open access, etc. Disposition of public land through auctions should be encouraged as a straightforward step toward market competition.

**VII. Developing Subnational Credit Market**

China has large national savings. China also has large infrastructure demand due to rapid urbanization and the need to absorb millions of rural residents in urban areas. With SNGs having urban infrastructure responsibility, financial markets can help channel huge savings into large infrastructure investments. Diversified subnational credit markets can also provide more investment instruments for institutions (such as insurance companies, mutual funds) and individual investors.

**Two Models of Subnational Credit Market**

There are two major models of subnational credit markets: (i) bank lending, which financed municipal investment in Western Europe throughout most of the 20th century and is still the primary source of local credit financing there (Peterson 2002); though subnational bond market has been developing and the volume of issuing has actually increased in 2009 as an additional
source to bank lending; (ii) The United States, which has relied on the capital market to finance SNG borrowing, has a deep and competitive bond market. Annual issuances of SNG bonds are about US$400 billion with outstanding liabilities at about US$3 trillion. Individual investors are the largest holders of U.S. subnational bonds, followed by mutual funds, bank trust accounts, banks, insurance companies, and corporations (Maco 2001). In China, UDIC borrow from banks, as well as, with the central government’s approval, issue bonds.

It is important to develop a competitive and diversified funding source for infrastructure financing, and to have different financing instruments competing to lower financing cost. In establishing a framework for municipal finance borrowing after the fall of apartheid, South Africa clearly understood the benefits of competition in the subnational credit market. Its Intergovernmental Fiscal Review report states, “Active capital markets, with a variety of buyers and sellers, and a variety of financial products, can offer more efficiency than direct lending. First, competition for municipal debt instruments tends to keep borrowing costs down and create structural options for every need. Second, an active market implies liquidity for an investor who may wish to sell. Liquidity reduces risk, increases the pool of potential investors, and thus improves efficiency” (South Africa National Treasury 2001: 192).

According to Peterson and Kaganova (2010), there is a policy argument for having municipalities borrow at the true, market cost of capital. There are counter-arguments for subsidizing loans under some conditions. This issue has been the subject of continuing policy debate. However, it is generally agreed that significant movement toward market pricing of municipal debt would be economically efficient, at least for those municipalities that are creditworthy. One important policy is that a competitive market should be established on the lending side, to ensure the lowest cost, sustainable availability of credit. This means opening access on equal terms to bank lending and bond issuance, prohibiting monopolies of ‘municipal banks.’

This has been a tough challenge. The primary experience coming out of Europe and many developing countries has been to have a specialized municipal lending bank with monopoly lending rights, often tied to allocation of grants/subsidies for infrastructure projects.

According to Peterson (2002), financial sector deregulation has eliminated the possibility of having quasi-monopoly municipal banks draw on specially protected government allocations of low-cost, long-term savings to finance subnational infrastructure. In a competitive world, bonds have more ways to tap institutional and household long-term savings. Even when the ultimate credit extended to a local government continues to be a loan from a bank or other financial institution, the financial intermediary will increasingly raise its own capital for lending from bond issues.

Credit Assessment of SNG and UDIC

Rigorous creditworthiness assessment by independent credit rating agencies is a precondition for accessing the capital market.\(^37\) It requires disclosure of independently audited public financial accounts, thereby strengthening the role of markets in fiscal monitoring and surveillance. Credit

\(^{37}\) For a review of how international rating agencies Standard & Poor’s, Moody’s, and Fitch access subnational creditworthiness, see Liu and Tan (2009).
ratings will also have a strong bearing on the dynamics of fiscal and financial risks at the subnational level. They help national and subnational governments manage debt rollover risks associated with interest and exchange rates and maturity structure, as well as contingent liabilities such as locally managed infrastructure contracts and off-budget activities.

Even for bank borrowing, subnational credit ratings can play a useful role. Mexico introduced a credit rating system for SNG. Although subnational participation in the credit rating is voluntary, the requirements of the capital-risk weighting of bank loans introduced in 2000 and of loss provisions introduced in 2004 aim at imposing subnational fiscal discipline through the market pricing of subnational credits.

In Colombia, the Fiscal Transparency and Responsibility Law (2003) also tightened the regulations on the supply side. Lending to subnationals by financial institutions and territorial development institutions must meet the conditions and limits of various regulations, such as Law 617 and Law 817. Otherwise, the credit contract is invalid and borrowed funds must be restituted promptly without interest or any other charges.

**Regulation of Subnational Credit Market**

Developing a subnational bond market as part of subnational credit supply system would require a coherent set of securities regulations. In many ways, securities regulations for subnational bond are similar to those for sovereign and corporate bonds. It is difficult to envision a country with a viable subnational bond market without viable sovereign and corporate bond markets.

The institutional infrastructure for bond issuing and transactions, such as regulations on credit rating agencies, broker-dealers, underwriters, and auditors, are similar across sovereign, sub-sovereign and corporate bonds.

Security laws cannot prevent defaults and financial deterioration of subnational governments. Securities laws also cannot replace rules for prudent fiscal management of SNG and for corporate governance for public entities and special purpose vehicles that are owned by local governments. What security laws contribute to the development of subnational bond market is to incorporate disclosure requirements mandating disclosure to investors of all material information that would affect an investor’s decision to buy, sell, or hold a security. Securities regulations may also cover the offer and sales of securities and the regulation of issuers, trading systems, and professionals who bring issuers’ securities to market, etc.

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38. *Rollover risk* refers to the difficulty of repurposing debt when subnational governments encounter liquidity problems. The cost of rolling over debt increases dramatically. In some cases, debt cannot be rolled over at all. To the extent that rollover risk is limited to the risk that debt might have to be rolled over at higher interest rates, it may be considered a type of market risk. However, because the inability to roll over debt or exceptionally large increases in government funding costs can lead to, or exacerbate, a debt crisis—in addition to the purely financial effects of higher interest rates—such debt is often treated separately (IMF and World Bank (2001)).
Box 4: US Securities Laws Applicable to Municipal Securities

Securities Laws
- The Securities Act of 1933 established a regulatory scheme for offerings of corporate securities, but exempted offerings of municipal securities. It also included the first anti-fraud provision, which applies to both corporate and municipal securities.  
- The Securities Exchange Act of 1934 established the SEC to enforce civil anti-fraud laws, regulate brokers, dealers, and certain other market organizations and professionals. Like the Securities Act of 1933, its anti-fraud provisions apply to all securities, including municipal securities.  
- There are also criminal securities fraud laws, enforced by the US Department of Justice, private securities litigation, and enforcement actions under state securities laws.

Basic Principles
- Disclosure: Organizations that publicly offer securities must tell investors the whole truth about their businesses, financial condition, the securities they are selling, and the risks involved in investing. Investors make their own investment decisions.  
- Honest markets: People and firms who sell and trade securities – brokers, dealers, and exchanges – must treat investors fairly and honestly, putting investors' interests first.

Regulation of Municipal Securities Trading
- Brokers and dealers who participate in transactions of municipal securities are required to follow the rules of both the SEC and the Municipal Securities Rulemaking Board (MSRB).  
- The MSRB, which was established by US law in 1975, issues regulations for brokers and dealers who engage in municipal securities transactions.  
- MSRB rules cover many areas including customer protection, record keeping, clearance and settlement, trade reporting, broker-dealer conduct (including political contributions by broker-dealers and employees who deal with municipal securities), and the submission of information to an electronic system known as EMMA (Electronic Municipal Market Access system) that makes it immediately available to the public on the MSRB’s web site (www.emma.msrb.org).  
- Disclosed information includes annual audited financial statements from issuers.  
- Emphasis on transparency.

Source: Haines (2009)

Over the long-term, the development of subnational credit markets would also benefit from self-regulation and "buyer beware" approach. Many US regulations were developed by the market players themselves or through market practice. For example, the Government Finance Officers Association in the U.S. developed many municipal bond disclosure rules and practices that were adopted in the industry. The US market has also benefited from 200 years of operation, during which investors learned the hard way about the consequences of defaults, and the fact that there are no guarantees that higher levels of government will bail out defaulting subsidiaries. While

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39 Municipal securities in the United States include securities issued by states, local governments and their agencies and instrumentalities. This includes municipalities, districts (such as school districts), special purpose government entities (such as housing authorities), and a variety of other government entities (such as airport authorities). Municipal securities include all debt instruments issued by states and local governments, including bonds, notes, financing leases, variable rate obligations, etc.
allowing subnationals to default may have adverse impacts on bank assets and on investors’ appetite, these considerations must be balanced against the negative consequences of moral hazard and bailing outs on market development.

VIII. Suggested Reform Options

The ban on subnational borrowing in China has not worked: subnational governments have borrowed off-budget in a less regulated and less transparent way. The off-budget financing has supported unprecedented large-scale urban infrastructure transformation and economic growth in China. Its limitations—the lack of transparency, the large stock of implicit debt and its potential impact on the quality of bank assets, and lack of deep and diversified subnational credit markets—have become more important as China enters the new phase of economic growth and scientific development.

An effective regulatory framework can reap the benefits of allowing subnational borrowing while mitigating its risks. Subnational borrowing can expand the financial resources available for infrastructure investment to support continuing rapid urbanization while facilitating more efficient and equitable infrastructure financing. The rationalization of subnational borrowing would enhance fiscal transparency and increase the role of markets in fiscal surveillance. It would also facilitate the reform of financial markets to channel savings into investments more efficiently.

China has made important progress in addressing implicit debt liabilities and moving toward a transparent framework. Continuing reforms would need to deal with two challenges. The first challenge is to transform direct lending from the central government to SNG into SNG’s market borrowing. Issuing provincial bonds as part of the fiscal stimulus is a first step in this direction. The design of the provincial bonds is innovative and pragmatic. The second challenge is to develop regulatory frameworks for UDIC/SPV direct borrowing from the market (bank credit and bonds).

Based on international experiences and lessons, Table 2 summarizes suggested reform options in six areas of reform. These reform areas are: developing ex ante regulation, designing ex post insolvency system, regulating UDIC, strengthening subnational debt management capacity, managing fiscal risks of land financing, and developing competitive subnational credit markets.

Ex ante regulation. The regulatory framework would need to spell out ex ante rules governing the purposes of SNG borrowing (e.g., long-term borrowing for public capital investments only), types of debt allowed (e.g., prohibiting exotic speculative financial products), and procedures for issuing debt. Ex ante regulations in developed and emerging economies provide useful references. Fiscal targets can be established quickly focusing on debt service ratio, balanced operating budget, and guarantee limits, while developing thresholds for fiscal sustainability assessment would take more time and efforts. The fiscal targets/monitoring indicators for SNGs are different from those for UDICs.
<table>
<thead>
<tr>
<th>Reforms</th>
<th>Short Term</th>
<th>Medium and Longer Term</th>
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| Ex ante regulation              | - Specify purposes (e.g., long-term borrowing for public capital investment only), types, and issuing procedure of debt instruments  
  - Develop fiscal targets for SNG focusing on debt service ratio, balanced operating budget, and guarantee limits  
  - Refine thresholds for fiscal sustainability assessment  
  - SNG develop medium-term fiscal framework  
  - Develop standardized accounting, reporting and audit requirements  
  - Develop market disclosure requirements |
| Ex post insolvency system       | - Develop monitoring indicators for fiscal deterioration  
  - Develop monitoring indicators for fiscal insolvency  
  - Develop an administrative type insolvency system for SNG  
  - Develop UDIC/SPV insolvency framework focusing on public assets and services |
| Regulating UDIC                 | - Assess UDIC debt liability including guarantees (e.g. consider mandated reporting from financial institutions)  
  - Specify purposes (e.g., long-term public capital investment only), types, and issuing procedure of debt instruments  
  - Develop rules for borrowing, e.g.  
    o Sector specific ratio of operating revenues to debt service  
    o Trusts for debt proceeds and services  
    o Rules on assets as collateral pledge  
    o Limits on guarantees.  
    o Develop guarantee guidelines linking guarantees to fiscal and debt service capacity of guarantee/guarantor  
  - Carry out UDIC corporate governance reform  
  - Develop legal framework for revenue bonds  
  - Develop regulatory frameworks for tariff setting  
  - Develop GAAP accounting standards  
  - Develop market disclosure requirements |
| Strengthen SNG debt management capacity | - Pilot debt management module in select cities, provinces, and UDIC  
  o Focus on 4 pillars of debt management strategy  
  o Establish rules on debt service structure  
  - Scale up pilot  
  - Carry out training on fiscal, budget and debt management  
  - Integrate SNG and national debt reporting system |
| Managing fiscal risks of land financing | - Pilot risk assessment of bank loans collateralized by land and other hard assets  
  - Prohibit landing proceeds to operating budget; land proceeds be part of capital budget  
  - Establish land trust for land proceeds  
  - Develop regulations on land financing (e.g., rules on collateral/loan ratios)  
  - Linking land financing with capital budgeting  
  - Compile inventory of SNG land assets  
  - Develop accounting and disclosure requirements |
| Developing competitive SNG credit markets | - Pilot credit assessment for loans and bonds  
  - Improving rules for capital ratios for financial institutions  
  - Develop securities laws with respect to subnational securities  
  - Develop market disclosure requirements; improve the capacity of credit risk analysis by lenders |
Fiscal transparency is a precondition for SNG/UDIC to access capital markets (Guangdong Province is leading the way in fiscal disclosure). Credit assessment by reputable rating agencies can be required of all SNG/UDIC wishing to access the capital markets. Mexico’s enforcement of credit ratings through mandated risk-adjusted capital reserve ratios for lenders offers a useful example. The US EMMA internet-based information disclosure for states, municipalities, and SPVs that issue securities informs types of materials to be disclosed. A list of fiscal indicators evaluated by international rating agencies serves as additional references. Major emerging economies have been moving toward international standards of government finance report and disclosure.

China could consider a phased approach, allowing fiscally strong SNG/UDIC to access the financial markets first. Although legislation cannot favor selected SNG, differentiation could be designed as self-selective—that is, only those SNG/UDIC that have adopted fiscal/financial transparency and budgetary/governance reforms could be allowed to access the markets. Furthermore, developing medium-term fiscal framework by SNG helps anchor debt financing in a sustainable way.

**Ex post insolvency system.** Key elements of insolvency mechanisms could be developed that not only restructure any implicit distressed subnational debt but also deal with possible future insolvency. How the central government restructures subnational debt will not only influence profoundly the future borrowing behavior of borrowers, it will also shape the expectation of lenders, particularly when the set of suppliers of subnational creditors is expanded to include private creditors. The recent restructuring of rural school debt by the Chinese Ministry of Finance shows a thoughtful design in avoiding moral hazard. Experiences from other countries show that it may not be politically feasible not to rescue a failed SNG, particularly when dysfunctional service delivery affects a large segment of the population. However, international experiences have also demonstrated repeatedly that unconditional bailouts of SNG lead to moral hazard, encouraging irresponsible fiscal behavior by SNG and reckless lending.

For SNG borrowing with debt service coming out of the SNG budget, the Ohio State fiscal monitoring program of its municipalities and the French central government monitoring of its SNG provide helpful examples. Such monitoring, combined with ex ante rules, can reduce the probability of defaults. China can in the short term develop two sets of monitoring indicators for SNG: one measuring fiscal deterioration and another one for fiscal insolvency. The key is to monitor, and intervene early, to prevent SNG from deteriorating into insolvency. Over the longer-term, a more systemic insolvency system can be developed to include debt restructuring rules and a priority structure for settling claims.

A judicial approach, such as the US Bankruptcy Code Chapter 9 for municipalities, requires insolvency experts and a mature judicial system. As China just enacted its corporate bankruptcy code in 2006, it will take time to develop experience and expertise. For insolvent UDIC, China may consider developing a special provision for UDIC under the China corporate bankruptcy
code, or a free-standing legislation. Both need to recognize that public assets of UDIC cannot be liquidated and essential public services must be protected as the insolvent UDIC goes through debt restructuring.

**Regulating UDIC.** Given the large stock of UDIC debt, the first priority is to assess and quantify the liabilities including guarantees issued for UDIC. Some Chinese cities have started to develop data systems for measuring UDIC debt. One option is to require that banks and other financial institutions report the amount, types and structure of liability. The second priority is to establish ex ante regulations—types, purposes and issuing procedures—for UDIC future borrowing. The US regulation for SPV can provide useful reference. As part of ex ante regulations, UDIC long-term borrowing must be for public capital investments, and ratios of operating revenues to debt service would be established and pledge of hard assets as collaterals be regulated. SNG guarantee of UDIC borrowing can play a useful role but would follow prescribed rules such as total guarantees provided by a subnational government be within a percentage of the SNG revenues.

Subnational UDIC and other subnational entities in China have already been issuing bonds of over US$100 billion since 2000. A key concern is the contingent liabilities of the outstanding debt. To reduce and ring-fence fiscal risks, China could develop regulatory frameworks for UDIC to issue revenue bonds. In contrast to the general obligation bonds of SNGs, revenue bonds are issued by subnational SPV and secured by the revenue stream generated by a specific project that the debt is to finance. Revenue bonds reinforce self-sustaining finance, and allow the market to play a central role in enforcing debt limitation, pricing risks, and matching the maturities of liabilities with the economic life of assets. In US, revenues bonds, though outside the debt limitations set by states, follow strict regulations, meet the required debt service limits, and have a low rate of debt default. In general, SNG and their SPV in the United States have a very low rate of default comparing with private corporations. However, the financial crisis since the late 2007, growing subnational pension and other liabilities (and the use of structured financial products by some SNGs) have increased fiscal pressure for SNG in the United States.

Developing revenue bonds can be supported by complementary reforms, including: corporate governance reform, regulatory frameworks for setting tariffs, and standardized reporting, audit and market disclosure requirements. The financial strength is assessed through a credit rating system that assesses a borrower’s ability to pay debt. Hard budget constraints on SPV are a must.

**Strengthening SNG debt management capacity.** China may consider piloting debt management modules in selected cities, provinces, and UDIC. Like national debt management, subnational debt management is the process of establishing and implementing a strategy for prudently managing the entity’s debt. The stock of debt, and new borrowings arising from budget and off-budget sources, should be managed in consistency with the SNG’s cost and risk preferences. The global financial crisis highlights the importance of managing liquidity and refinancing risks. The rules for SNG/UDIC debt structure (e.g., interest rate, maturity, and currency risk) can be established quickly in the piloting phase. Good practices from cities such as Bogota (Colombia) and US states such as Maryland and Virginia, both AAA rated, offer examples. These pilots can also consider introducing the application of debt sustainability modeling.
Managing fiscal risks of land financing. Land assets are an important ingredient of subnational infrastructure finance in most developing countries including China. Proceeds from land transactions often exceed annual own tax revenues and fiscal transfers. In contrast to the frameworks now found for regulating subnational borrowing across countries, there is generally a lack of coherent oversight and regulation for land financing of large-scale infrastructure in developing countries. Land sales often involve less transparency than borrowing. Many sales are conducted off-budget, which makes it easier to divert proceeds into operating (non-capital) budgets. Revenues from sell of land assets exert a much more volatile trend and could create an incentive to appropriate auction proceeds for financing operating budget, particularly in the time of budget short falls during the economic downturns. Furthermore, bank loans for financing infrastructure are often backed by land collateral and expected future land-value appreciation. The recent precipitous declines in land values in many countries create a new element of systemic risk for subnational borrowing. All of these factors make it critical to develop ex ante prudent rules, comparable to those governing borrowing, to reduce fiscal risks and contingent liabilities associated with landing financing of infrastructure.

The short term reforms could include risk assessment of bank loans that are collateralized by land and other hard assets, establishing land trusts or special funds for land transaction proceeds, and prohibiting land sell/leasing proceeds from diverting to operating budgets. Over the medium-term, more challenging reforms include land asset management, developing rules on collateral/loan ratios, and linking land financing with medium-term fiscal framework and capital budgeting.

Developing competitive subnational credit markets. China has large national savings. China also has large infrastructure demand due to rapid urbanization and the need to absorb millions of rural residents in urban areas. With SNG having urban infrastructure responsibility, financial markets can help channel huge savings into large infrastructure investments. Diversified subnational credit markets can also provide more investment instruments for institutional and individual investors. It is desirable to develop a competitive and diversified funding source for infrastructure financing, and to have different financing instruments competing to lower financing cost. There is a policy argument for having municipalities borrow at the true, market cost of capital. There are counter-arguments for subsidizing loans under some conditions. This issue has been the subject of continuing policy debate. It is generally agreed that significant movement toward market pricing of subnational debt would be economically efficient, at least for those subnationals that are creditworthy. One important policy objective is that a competitive market should be established on the lending side, to ensure the lowest cost and sustainable availability of credit. This means opening access on equal terms to bank lending and bond issuance, and prohibiting monopolies of ‘municipal banks.’

Securities laws and issuing institutions and infrastructure (appraisal, dealers, auctions, etc) are part of developing a sub-sovereign credit market, similar to laws regulating sovereign and corporate debt. Over the long-term, the development of subnational credit markets would also benefit from self-regulation and "buyer beware" approach. Many regulations in the United States were developed by the market players themselves or through market practice. The US market has also benefited from 200 years of operation, during which investors learned the hard way about the consequences of defaults and the fact that there are no guarantees that higher levels of government will bail out defaulting subsidiaries. While allowing subnational to default
may have adverse impacts on bank assets and on investors’ appetite, these considerations must be balanced against the negative consequences of moral hazard and bailing outs on market development.

In any capital market development process, investors would need to learn to be responsible for investing -- screening borrowers through their own credit analysis, reading reports by ratings agencies, paying attention to insurance spread, and investing via bond funds, etc.

To conclude, China is well positioned to strengthen subnational debt financing—direct market borrowing by SNG and UDIC—while managing risks to the macroeconomic frameworks and financial system. China’s strengths include:

- A stable macroeconomic framework, including an impressive growth record; economic growth is a key determinant of debt sustainability.
- Large domestic savings, which provides capital supply to the financial markets.
- An ambitious goal of developing a domestic capital market; the sub-sovereign debt market can be integral to well developed domestic capital markets.
- Huge infrastructure needs, which are best served by financial market long-term financing.
- A decentralized fiscal structure, with SNG having stronger fiscal autonomy than many other developing countries.
- Infrastructure companies organized along infrastructure networks and the adoption of cost recovery goals – both are critical for developing a deep revenue bond market
- A track record of progressive and pragmatic reforms.

International experience – both positive and negative—can offer useful references as China develops its regulatory frameworks for subnational debt financing. This paper is intended for that purpose.
Annex 1: Fiscal Indicators and Fiscal Sustainability

Two key questions relate to how to select fiscal indicators for regulating subnational government debt financing and how these fiscal indicators relate to subnational fiscal sustainability.

First, which is the most critical ratio for assessing fiscal sustainability of subnationals? The usual candidates are: debt stock-to-SGDP (subnational GDP) ratio, debt stock-to-total revenue ratio, debt service-to-total revenue, and budget deficit-to-SGDP ratio.

Debt sustainability is assessed based on debt and debt service relative to measures of repayment capacity. Whether using SGDP or revenue as denominator of debt and debt service depends on which indicator better measures the repayment capacity of subnationals. Subnational fiscal sustainability analysis (FSA) tends to use debt (service) over revenue, partly because the SGDP often doesn't reflect the base of resources available to subnational government.

The debt-to-SGDP ratio and debt-to-revenue ratio can be implicitly linked if subnational revenues are highly correlated with its own GDP. In many cases, they are not. For example, if a country has a transfer system that puts emphasis on regional equity, then a region with larger share of GDP may get smaller share of transfers. In this case, debt-to-revenue is a better measure. Another example, if the subnational economy is resource based while the resource related taxes are collected by the central government, then the state GDP as measure of repayment capacity of subnational government is misleading. Furthermore, when a country's statistical system is poor, revenues measure tends to be more accurate than SGDP.

However, GDP measure is still important if a country's legal framework mandates that total public debt (central + subnational) cannot exceed certain ratio (e.g., <= 60% in EU countries), then debt / SGDP becomes relevant.

Even for the measure of debt-service over revenue, there are challenges. For example, some countries exclude transfers that are used for mandated federal expenditures. Basically, the concept of revenue has to be a measure of the revenues that subnational governments have some degree of control. There is also no best-practice ratio, depending on the structure of expenditures.

Budget deficit/SGDP is used in countries such as India. 3% is the limit for any state. Basically, if the central government runs 3% of deficit/GDP, and states run 3%, then it is already 6% in India (actuals are higher). One preferred concept is zero operating deficit, which is revenue must cover all current expenditures, so borrowing is for capital investment only. This is the concept used in US states. In EU context, fiscal deficit/GDP must be no more than 3% (center+subnationals). Taking into account the central/federal government deficit, then the deficit for subnationals would be smaller than 3%. How smaller would depend on how politics and other factors allocate the deficit financing among tiers of government.

In assessing fiscal sustainability, it may also be useful to add other indicators that can capture the medium-term debt service burden by introducing a present value concept. We have not come across thresholds that can be used to assess sustainability for SNG. The debt thresholds of the low-income countries (LIC) external Debt Sustainability Framework (DSF) are empirically derived, but there are no empirically tested thresholds for LIC domestic debt due to data
constraints. Another complication is contingent liabilities of public enterprises owned by subnational governments. In the case of subnationals, it would be far more difficult to get data for empirical analysis. This means that for now we will have to assess sustainability on a case by case basis.

Second, what are the standard thresholds for each of these ratios that are normally used in assessing whether a sub-national's fiscal framework is sustainable or not?

It is an empirical question and the threshold is country period specific which depends on the growth rate, primary balance, interest rate and the creditworthiness of the government. Higher growth rate, lower interest rate and conservative fiscal policies are associated with higher debt limit. For example in an recent analysis we did, the country's debt is sustainable given most of its borrowings are on concessional terms while the same set of fiscal policy wouldn't ensure debt sustainability with the same debt level if market rate is applied.

If a country has a debt limitation for subnational governments, for example, maximum debt/revenue ratio, then this will serve as legal limitation on how much a subnational government can borrow. For example, Fiscal Responsibility Law in Brazil sets debt/net current revenue <= 2. Poland sets debt limitation for subnationals with debt/revenue < 60%. Both countries also set limits on debt service/revenue (in Brazil, the denominator is net current revenue). A subnational government may be fiscally sustainable even when exceeding this limit, because this subnational government can borrow at low cost with long maturity. Nonetheless, the legal framework for subnational governments binds the credit operation of subnational governments. FSA study therefore will also have to use the limit set by the law to assess the capacity of subnational governments to conduct deficit financing.

In India, a state with a debt service ratio exceeding 20 percent is classified as having a debt stress status, triggering the central government’s close monitoring of additional borrowing by the state. As recommended by the 12th Finance Commission, fiscal responsibility legislation is mandatory for all states, with the revenue deficit to be eliminated and the fiscal deficit to be reduced to 3 percent of gross state domestic product by fiscal year 2009.\(^{40}\)

Colombia sought to limit subnational debt to payment capacity (Law 358 in 1997 and the Fiscal Transparency and Responsibility Law in 2003). A traffic-light system was established to regulate subnational borrowing. Subnational governments rated in the red-light zone are prohibited from borrowing, and those in the green-light zone are permitted to borrow. The red-light zone is defined as the ratio of interest to operational savings greater than 40 percent and the ratio of debt stock over current revenues greater than 80 percent.\(^{41}\)

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\(^{40}\) Revenue deficit: total revenue – current expenditures.

\(^{41}\) Law 358, passed in 1997, introduced a rating system for subnational governments by establishing indebtedness alert signals. These signals were based on two indicators: a liquidity indicator (interest payment/operational savings) and a solvency indicator (debt/current revenue). Subnational governments were classified into one of three zones. Governments in the red-light zone were not allowed to borrow, governments in the green-light zone were allowed to borrow, and governments in the yellow-light zone were allowed to borrow with the permission of the central government. Law 795, passed in 2003, eliminated the yellow-light category. Law 617, passed in 2000, established a ceiling for the ratio of discretionary current expenditure to nonearmarked current revenues. The implementing rules for Law 819, which was passed in 2003, added a third indicator to the traffic-light system, by relating the primary surplus to debt service.
In Brazil, the debt restructuring agreements between the federal government and the states established a comprehensive list of fiscal targets—debt-to-revenue ratio, primary balance, personnel spending as share of total spending, own-source revenue growth, and investment ceilings—as well as a list of state-owned enterprises or banks to be privatized or concessioned. In the United States, the rules governing subnational borrowing depend on the type of debt issued, the revenue used to service the debt, and the type or form of government issuing it. These rules vary from state to state. Markets play a vital role in fiscal surveillance (Liu and Wallis 2007).
References


