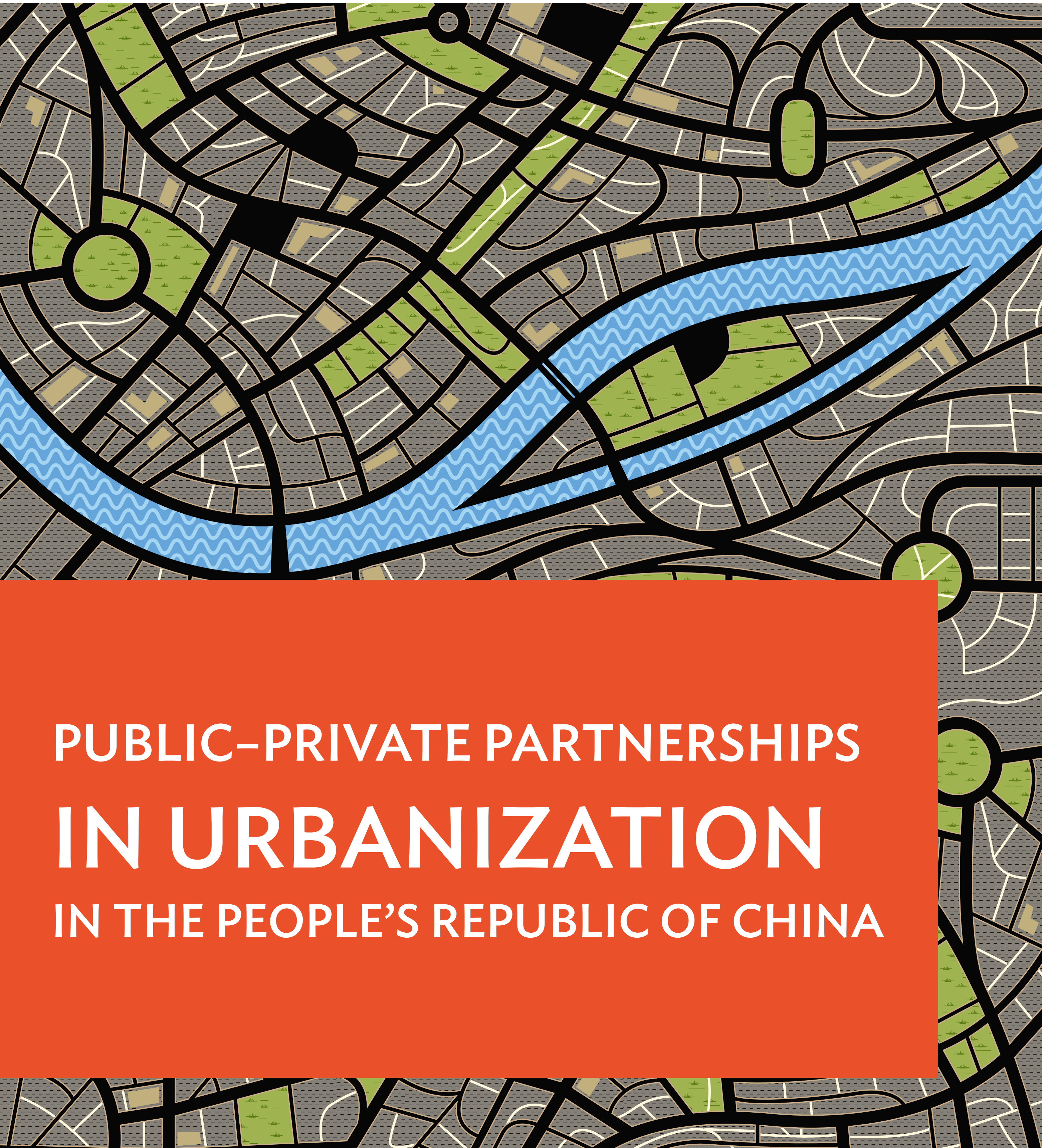

PUBLIC–PRIVATE PARTNERSHIPS IN URBANIZATION IN THE PEOPLE'S REPUBLIC OF CHINA

ASIAN DEVELOPMENT BANK

PUBLIC–PRIVATE PARTNERSHIPS
IN URBANIZATION
IN THE PEOPLE'S REPUBLIC OF CHINA

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Abbreviations

ADB	–	Asian Development Bank
CGH	–	China Gas Holdings Limited
EARD	–	East Asia Department
IFI	–	international financial institution
MOF	–	Ministry of Finance
NDRC	–	National Development and Reform Commission
PPP	–	public–private partnership
PRC	–	People's Republic of China
PSOD	–	Private Sector Operations Department
SOE	–	state-owned enterprise
TA	–	technical assistance
TVET	–	technical vocational education and training

Summary

This report summarizes the proceedings of the Public–Private Partnerships (PPPs) in Urbanization workshop held in Beijing on 22–23 August 2013. The workshop was organized by the Ministry of Finance, the National Development and Reform Commission, the Asian Development Bank (ADB), the PPP Research Committee hosted by the Institute of Fiscal Sciences, and the Regional Knowledge Sharing Initiative hosted by ADB. Some 200 participants from the central government, 35 local governments, financiers, private service providers, academic and research institutions, and development partners joined the workshop. The workshop allowed those who were undertaking the planning, preparations, and implementation of public–private partnerships (PPPs) to share their knowledge and best practice approaches to PPPs.[1]

The workshop drew from the extensive use of PPPs in the People's Republic of China (PRC) since the early 1990s. More than 1,000 PPP projects, valued over $100 billion, are providing services in transport and communication, energy, clean water, wastewater treatment, and a variety of social services. Case studies from this experience were presented by local governments and industry practitioners. The workshop participants reviewed these experiences and insights to show how "pathfinder" PPPs could be prepared and to demonstrate new ways of using PPPs. They also examined innovative ways of financing PPPs.

There was consensus in the need to explore how PPPs can address the challenges arising from the rapid urbanization of the PRC. It was recognized that the high demand for infrastructure, education, health care, social housing, and other public services is straining the fiscal capacity of local governments. It was acknowledged that this demand must be met if development goals are to be achieved. Urban services offering high environmental benefits, such as public transport, clean energy, and waste management were also identified as needing substantial financing.

The discussion emphasized the broad scope of the PPP agenda. It was accepted that PPPs can do more than just mobilize additional financial resources and expertise to deliver more public services. Participants agreed that PPPs provide a performance-based management framework that can strengthen the quality of public services and reduce their cost.

Dialogue extended to the actions that would strengthen the PPP program and generate quick results. The Ministry of Finance and the National Development and Reform Commission endorsed the importance of strengthening the enabling environment for PPPs and building capacity in how to prepare, implement, and manage PPPs. Government agencies were encouraged to tap into the knowledge resources of international financial institutions, such as ADB and the World Bank, and bilateral partners and other partners such as the Cities Development Initiative for Asia. The international financial institutions and other partners were in turn encouraged to promote PPPs in a pragmatic, proactive, and prudent manner.

At the same time, the potential fiscal risk from PPPs was emphasized. It was recognized that fiscal agencies need to understand and recognize these risks and ensure that prevention and control mechanisms are in place.

[1] This was funded as a subproject of ADB technical assistance, the Facility for Policy Reform and Capacity Building III (TA 7317-PRC).

Introductory Remarks

From the presentation of Ayumi Konishi, Director General, East Asia Department, ADB

Deputy Director General Yang Yingmin of the Ministry of Finance, Vice Mayor Jiao Yuan Chao of the People's Municipal Government of Harbin, distinguished guests, friends, colleagues, ladies and gentlemen, good morning to you all.

I would like to extend my warm welcome to all of you here for today's workshop. The Asian Development Bank (ADB) is very pleased and grateful for this opportunity to support your discussion of public–private partnerships (PPPs), and their role in supporting urbanization in the People's Republic of China (PRC).

ADB has been helping in the development of the PRC since 1986 with more than $26 billion of financial assistance for 194 projects in the public sector. ADB also has been supporting the private sector and nonsovereign operations in the PRC since 1988 with nearly $4 billion of financial assistance for 35 operations. Some projects have incorporated elements of PPPs. For example, ADB helped develop and finance one of the initial pathfinder PPPs—the Chengdu Number 6 water treatment plant approved in 1999. ADB also provided technical support for the structural reforms needed to make PPPs possible, such as revisions to water and wastewater tariffs. Over the last 15 years, ADB has financed around $2 billion in PPP investments in the PRC in water supply, waste management, and energy sectors.

Yet, we do appreciate that ADB assistance to projects using PPPs has been rather limited or modest, particularly in light of the vast need for infrastructure development in support of urbanization, and the large potential for mobilizing private sector resources. As the PRC's urbanization is accelerating, we believe it is essential for us to work more closely with the private sector to ensure greater efficiency and maximum impact of development efforts. Partnering with the private sector will not only bring in necessary financial resources but also managerial know-how, new technology and innovation, and the economic discipline needed to make the services sustainable. Accordingly, ADB is very keen in expanding its engagement with the private sector in the provision of urban services.

PPPs are attracting increasing attention across Asia and the Pacific. This is building on a pragmatic acceptance of the limits of conventional approaches to providing public services. The region's governments are unable to keep up with the demands arising from high economic growth and rapid urbanization. Better ways of mobilizing private financing are needed. Performance-based approaches that push service providers to innovate and deliver higher quality services at lower cost are called for.

At ADB, we see PPPs as providing part of the solution, and we are deeply committed to help our member countries explore new and better ways of using PPPs.

One of the advantages that the PRC has is its tremendous wealth of experience. More PPPs have been completed in the PRC than in any other Asian economy, although the sectors in which PPPs have been concentrated are more limited than elsewhere. There remain huge opportunities as well as the need to widen and deepen private sector involvement in making public investments and providing public services.

We are actually aware that by using the same term "PPP," many of us may be talking about completely different things. There are many different structures and ways to design a PPP. Some arrangements may fit in one specific situation but the same structure may not really work effectively in different economic, social, cultural, political, and business contexts.

I see today's workshop as an excellent opportunity to review the PRC's own experiences and use the knowledge gained as the foundation for an expanded PPP program. Not only will this benefit the PRC, it will also benefit other countries that can learn from such experience and leadership.

At the same time, the PRC cannot be complacent. As I mentioned earlier, the experience of the PRC in PPP activities are mostly in the area of heavy infrastructure. We are aware that authorities are keen to extend the PPP model into new areas of the economy. PPPs are used widely in other countries to provide education, health, and other social services. We are very keen to draw on the insights from other countries to help the PRC develop new uses of PPPs.

I would like to reiterate the strong commitment of ADB and hope that, together, we can help develop and actually participate in financing and implementing a new generation of PPP projects in the PRC. My colleagues will explain in detail in the course of this workshop, how we can work with you in this regard. We are committed to help the PRC build capacity in PPPs, strengthen the enabling environment for PPPs, and then prepare and finance PPPs.

Our priority is to support high quality, "pathfinder" PPPs that address the urbanization of the PRC and assist in undertaking innovations in financing. Our intention is to build a broad package of support around such projects.

However, I should probably note here that we fully appreciate that building a stronger PPP program is a long-term commitment. There are still many issues that need to be addressed, and we need to be prepared to take risks in venturing into new areas to exploit the full potential of the PPP modality while thinking through all possible risks, and to take measures to mitigate or minimize such risks. I would like to assure you that we are prepared to make this commitment, and that we remain to be a reliable, long-term partner of the PRC in exploring the PPP potential. We are hoping to form long-term partnerships with a select group of cities that are prepared to explore new PPP approaches and use their experiences to demonstrate various PPP possibilities for others to learn from and to follow.

In providing support for PPPs, two departments of ADB will be involved: the East Asia Department, which I head; and the Private Sector Operations Department. These two ADB departments assure you of our "seamless support" and I am confident that our joint support will help you showcase best practice approaches that will catalyze follow-on projects.

Thank you for the opportunity to support this important event. I wish you a fruitful workshop.

From the presentation of Yangmin Yang, Deputy Director General, International Department, Ministry of Finance

Good morning, everyone. I agree with Director General Konishi's comments on the development of PPPs in the PRC, and to his suggestions for improvement. Therefore, my speech will focus on one thing: how to make the best use of the resources of the international financial institutions (IFIs) so as to actively and steadily push forward the cooperation between the public sector and the private sector.

Let me start by addressing why we should actively promote PPPs. The per capita income of the PRC is only about $6,000. The international experience tells us that investment plays an important role in the transition to a high-income country. The history of other countries informs us that if the large investment needed to drive growth is lacking, a country will stay in the low-income stage and consumption cannot be sustained.

Over the past 30 years, the PRC's rapid growth has been fueled by investment in infrastructure, and the government has played an important role in the financing process. Looking to the future, the government will need to allocate public spending more and more from infrastructure toward social development and environmental protection. There is also a need to improve the efficiency of public resources in these areas. Hence, we all need to work to promote PPP development to encourage private investment in infrastructure and social services and improve efficiency.

Promotion of PPPs is in line with both our development needs and the needs of active international cooperation. The PRC is now the world's second largest economy, with its linkages to the world economy at an unprecedented level.

After the financial crisis, the international community discussed how to ensure that private capital flowed steadily into productive areas on a long-term basis. We inevitably think of PPPs in this context. Developing countries want to use PPPs to attract private capital, especially foreign direct capital investment. Developed countries are also interested in PPPs, for two key reasons. Firstly, many developed countries have accumulated a rich PPP experience and advanced management skills, and they want to promote PPP development in order to export their PPP advisory services. Secondly, the investment in the real economy has faced major challenges since the financial crisis. Many developed countries need to update and further develop their infrastructure, and they expect the PPP investment model to attract business investment from emerging market countries.

The international consensus on the importance of PPPs has been reflected at a number of international economic forums, such as the G20 forum. For the past 2 years, the G20 has sought the best practice way of ensuring long-term and steady flows of private capital to productive areas of the economy. PPPs are seen as a way of doing so. Over the last 2 years, the Asia-Pacific Economic Cooperation (APEC) has also invested a lot of effort in exploring the PPP model.

We have promoted PPP work because it is consistent with our national development needs and is also in line with this new era of international economic cooperation.

In this context, the Ministry of Finance (MOF) has given PPP an important place in its future planning and seeks to promote PPP in multiple ways. We could cite three examples: (i) while ensuring an effective control of financial risk, MOF supports and guides local government to use innovative financing in urban construction such as PPPs; (ii) MOF is supporting the accelerated construction of affordable housing projects using multiple channels to attract social capital for construction, operation, and management; and PPPs may become a preferred model; and (iii) MOF is promoting PPPs as a way for the government to promote and implement the purchasing of social services. MOF is also working with IFIs, including ADB, to identify efficient use of resources for PPPs.

We want to promote a safe and steady development of PPPs.

Why? In recent times, in the face of complex domestic and international situations, the Central Committee of the PRC has adopted the bottom-line thinking. This means preparing for the worst result while striving for the best. This way of thinking stresses the importance of getting fully prepared and not panicking if there are emergencies.

We have to realize there is no free lunch. We have just highlighted the many benefits of PPP, but it also has many risks. For example, private corporate financing costs are higher than government financing costs, the public sector and private sector cooperation are not equal in cooperation, and PPPs can bring financial risk if the regulatory system is not in place.

Some PPPs require government contributions. For these projects, PPPs change the time profile of government expenditure. Rather than paying the entire construction cost during construction, such PPPs require governments to progressively pay the capital cost over the term of the PPP. So they cannot altogether avoid the need for payment. PPPs have long project cycles, usually 20–30 years, which far exceed the annual, midterm, or long-term budget of the government. The lack of a comprehensive regulatory system could lead to some government debts staying hidden, and may plant the seed for a later debt crisis. The outbreak of the financial crisis in some countries, such as Spain and Portugal, has shown that a weak regulatory system can lead to the actual fiscal debt burden being far greater after a crisis than the normal debt burden.

For these reasons, developed countries pay special attention to the regulation of PPPs. Of the more than 30 countries in the Organisation for Economic Co-operation and Development (OECD), 17 have specialized PPP departments, 11 of which are based in their MOF. They monitor the potential public debt risk. Such a regulatory system ensures that PPP development proceeds steadily and safely. Today, we asked our colleagues in the five divisions of the Ministry of Finance to attend the seminar. It is our hope that we can work with the international organizations in improving the regulatory system from the top–down perspective. This will guard against the risks of PPPs while helping promote them.

My three final points shall focus on the role of IFIs, such as ADB. MOF is the window for ADB, the World Bank, European Investment Bank, International Fund for Agricultural Development, and Global Environment Facility. We have made significant cooperation with the IFIs over the past 3 decades, in particular with ADB, on the development of the finance sector. Some of these projects are PPPs.

My first point is about the policy setting. As Mr. Konishi has said, the policy setting of the PRC was built on the efforts of international organizations like ADB. They have undertaken a lot of work over the past 30 years, including through technical assistance projects to reform the accounting and payment mechanism, to promote finance and taxation reform, and to improve the legal system.

Secondly, the IFIs actively helped the PRC to reform the pricing system, such as through the reform of the sewage fee. This was the first price reform in the 1980s. Undertaken with special approval from the State Council, the reform was carried out through international financial projects. These projects actually created opportunities for the private sector to enter the traditional areas of the public sector.

My third point is that the IFIs helped a lot with PPP demonstration projects. The Chengdu Number 6 water treatment plant, if I remember correctly, won international praise, and was known as the “outstanding project for international financing” of the year. Mr. Konishi also said that the PRC is the world’s largest country in terms of using PPP projects, but the usage is concentrated in infrastructure. Let me clarify that as early as 1988, we cooperated with the World Bank to implement a health project under which we bought health services from the private sector. In July 2013, the executive meeting of the State Council made a special study of the purchase of public services by public agencies for the promotion of social development. We can say that our work with international organizations in these areas served as pilot projects. Through technical assistance, through policy advice and demonstration PPP projects, ADB helped us train a lot of people on how to organize a PPP. The experiences laid the foundation and formed the human resource base for our large-scale promotion of PPP projects in the future.

We hope that the World Bank, ADB, and other international organizations can help us be more systematic and comprehensive in the promotion of PPP, and in designing an action plan that moves us further ahead. In this way, we can build a platform on which the PRC and the world economy can benefit from interaction and create win–win situations.

So we would like to say that today's seminar is for brainstorming our future cooperation. We welcome suggestions and advice on what you need, so we can better organize experts and other resources to respond to your needs.

I wish the workshop a complete success!

Outline of Presentations

This report summarizes the proceedings of the Public–Private Partnerships (PPP) in Urbanization workshop held in Beijing on 22–23 August 2013. The workshop was organized by the Ministry of Finance (MOF), the National Development and Reform Commission (NDRC), the Asian Development Bank (ADB), the PPP Research Committee hosted by the Institute of Fiscal Sciences, and the Regional Knowledge Sharing Initiative hosted by ADB.[2] The workshop addressed five main topics.

The first addressed the demand for PPPs arising from the PRC's rapid urbanization. This topic sets the scene for the workshop. The workshop looked at how PPPs—an arrangement between a public sector agency and a private partner to provide public services on a performance, risk-sharing basis—have been used in the PRC. The financial challenge created by urbanization, and the contribution that PPPs can make in meeting the challenge, were explored.

The second topic addressed the potential for innovation in PPP projects. Case studies were presented that looked at the experience of leading PPPs in the PRC's energy and transport sectors. Case studies based on international experience demonstrated how smart design can enhance project viability, and showed how PPPs can extend beyond hard infrastructure to deliver education, health, and other public services. A PPP model for social housing was also explored.

The third topic addressed the need for innovation in financing in the PRC. The workshop explored how additional, low-cost financing could be mobilized for PPPs in the PRC. What is needed to make PPPs bankable, the lessons from India's pursuit of a diversified financing base for PPPs, and priority policy initiatives for the PRC were examined.

Source: ADB staff.

The role of international financial institutions (IFIs) in supporting PPPs in the PRC provided the fourth topic. Representatives of ADB, the World Bank, and the Cities Development Initiative for Asia explained the support they can provide to both public and private partners to a PPP.

The fifth and final topic addressed the next steps for PPPs in the PRC. This topic drew together the workshop discussion. It covered the key challenges to be addressed in advancing the PPP agenda, and the practical actions that could be taken to support the use of PPPs in addressing the urbanization challenge of the PRC.

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2 This was funded as a subproject of ADB technical assistance, the Facility for Policy Reform and Capacity Building III (TA 7317-PRC).

Public–Private Partnerships and Urbanization

Public–Private Partnerships in the People's Republic of China

From the presentation of Dr. Sun Jie, Secretary General, PPP Research Committee and Researcher, Institute of Fiscal Sciences

Public–private presentations (PPPs) have a long history. They were, for example, used in Britain more than 400 years ago to help manage the waterways used for transport. While the history of PPPs is not as long in the People's Republic of China (PRC), they are not new to the country.

One of the earliest examples of PPP innovation in the PRC was in the late 1970s, when a shortage of meat led to the formation of a partnership with the private sector in the feeding of zoo animals. PPPs were also used to deal with a high theft of poplars planted along roads. To solve the problem, the trees were planted by the traffic bureau and the private sector was appointed to manage the trees. This partnership successfully conserved the trees.

While the PPP model is not new to the PRC, it has been used in a limited way. It has mainly been used as a financing model rather than the management model we now focus on.

ADB and other international financial institutions (IFIs) have different definitions of PPP. The PPP Research Institute refers to PPPs as a public–private cooperation under which the nonpublic sector offers resources and participates in public service provision. Such a partnership undertakes functions normally undertaken by government agencies. A PPP shares risk, against a basic principle that risk should be carried by the partner best able to manage that risk.

This definition of PPPs allows for considerable diversity in PPPs. It includes build–operate–transfer (BOT) arrangements, which are widespread in the PRC but are often not seen as PPPs.

Some PPPs are complex, and can have a long project cycle. Consequently, it is best to start the use of the PPP model at the beginning of project planning, instead of at the end. This will maximize the potential to realize the management advantages of PPPs.

Source: ADB staff.

Under a PPP, the private partner is allowed to earn a profit. Profits are, however, controlled so as to ensure that the public will benefit from the PPP arrangement. The profit provided to the private sector should be neither too much nor too little. It must be enough to maintain the enthusiasm of the private partner.

There are many practical challenges faced in finding the best sharing of risk and profits. Three recent examples from the PRC illustrate the diversity of the challenges facing the private partner:

- A road PPP that constructed tunnels to improve traffic flow was very effective. Observing the success, the local government sought to buy the tunnel, but negotiations failed. In response, the government built another tunnel, eroding the financial position of the original tunnel.
- A PPP provided a student dormitory for a university. The private operators sought to raise the student rent, but the university disagreed. This led to the nonpayment of electricity bills by the private partner and other problems. The project was considered a failure because agreement could not be reached over the rent.

- A private sector operator started the construction of a power plant before it secured a concession agreement from the government and a power purchase agreement from the state grid. This made it difficult for the operator to meet its obligations to lenders.

Local governments also face challenges. Fiscal risk is a key challenge if the local government must bear responsibility for the payments of the PPP project. Each government must act according to its capacity, and must ensure that the PPPs it goes into are affordable.

The PPP Research Committee is currently examining the policy and regulatory aspects of PPPs. The State Council has issued 54 policies relating to PPPs, and local governments have issued around 100. The range of government agencies involved in PPPs is very wide. At the central government alone, it includes the State Council, National Development and Reform Commission (NDRC), Ministry of Finance (MOF), Ministry of Communications, Ministry of Housing and Urban-Rural Development, Ministry of Education, Ministry of Health, Ministry of Water Resources, Ministry of Civil Affairs, China Banking Regulatory Commission, and State Administration of Taxation. A coordinator that would integrate the PPP work is still lacking, and a special law for PPPs.

Looking ahead, the priorities for PPPs in the PRC include the establishment of

- clear legislation,
- regulatory agencies that ensure both public and private interests are met,
- PPP guidance funds to improve the provision of financing to PPPs and allow a broader range of investors to engage in PPPs, and
- well-understood and fair exit mechanisms.

The Urbanization Challenge

From the presentation of Cai Jianming, Chinese Academy of Science and Douglas Webster of Arizona State University

The PRC is one of a very few developing countries to have initiated a policy of accelerated urbanization. This has delivered substantial payoffs realized in terms of economic growth and the alleviation of poverty. However, it has also brought new challenges to environmental quality, the provision and financing of urban infrastructure, and the quality of urban communities (particularly suburban and peri-urban communities).

The new leadership has recently raised urbanization targets. The primary target is that 70% of population is to be urbanized by 2025, for a total of 900 million persons. Achievement of this target will result in 250 million new urban residents over the next 12 years.

Government policy is focused on urbanization in under-urbanized regions. This will require the creation of “new cities” in under-urbanized regions, creating significant challenges in ensuring a viable economic base and livelihood for migrants in such cities.

Associated with the new urbanization policy is the reform of local government finance policies and mechanisms. Although not accurately estimated, local government debt is known to be high. The latest full audit, conducted in 2011, indicated local government debt of CNY10.7 trillion ($1.8 trillion).[3] Haitong Securities estimates local government debt at CNY15.0 trillion, comprising CNY9.5 trillion in loans, CNY3.0 trillion in trust funds (pensions, and others), CNY2.0 trillion in city investment funds, and CNY0.7 trillion in local government bonds.[4]

While central government debt is low, estimated at 14.4% of gross domestic product (GDP) in 2012, local government debt is high.The International Monetary Fund (IMF) estimates total government debt at 46% of GDP.[5]

The financing needs are huge. Approximately CNY40 trillion will be needed by 2030 to provide basic urban services for the 400 million additional urban residents expected by then. PRC urban experts point to a backlog in infrastructure needs, including demand arising from higher expectations of urban residents and migrants. The cost of clearing this backlog alone is estimated to be at least CNY10 trillion.

The capital spending required to absorb migrants is currently subdued by the *hukou* system (the household registration system). If the *hukou* system

[3] National Audit Office. 2011. Audit Findings on [the People’s Republic of] China’s Local Government Debts (No.35–General Serial No.104), Beijing. http://www.cnao.gov.cn/main/articleshow_ArtID_1154.htm
[4] http://europe.chinadaily.com.cn/china/2013-07/29/content_16844480.htm
[5] International Monetary Fund. 2013. Article IV, Consultation on [the] People’s Republic of China (June).

were liberalized, it would result in increased demand for infrastructure (for example, if public schools were required to service the children of migrants). The future urban infrastructure capital costs would expand rapidly.

Cost of Absorbing New Immigrants

The capital cost of providing public services, such as civil infrastructure and public utilities, is estimated at about CNY100,000 for each new urban resident.[6]

Housing, which is primarily delivered by the private sector but requires government subsidies (often through land) for affordable housing, basic infrastructure, and others, requires approximately CNY150,000 per capita.

Urban job creation in the formal sector requires approximately CNY60,000 per workplace. This would largely be provided by the private sector and state-owned enterprises.

Under the new urbanization policy, there is to be less reliance on bank borrowing by local governments, and more reliance on domestic bonds and innovative financing mechanisms such as PPPs. The new mechanisms need to attract private capital.

Wherever possible, these new mechanisms should generate revenue so as to ensure that priority urban projects are self-sustaining. Where revenue generation is possible, such as in public transit, such revenue streams should be pursued aggressively to free up capital for other projects with less revenue potential. As urban projects usually require land acquisition, they often have a high potential for win–win outcomes through skillful use of land readjustment instruments. PPPs provide an ideal framework to implement land readjustment.

To obtain optimal outcomes, urban PPPs should be set within the urban vision and strategic contexts. A perfectly designed and executed PPP that pursues the wrong objective can severely damage a city. Such a PPP could, for example, result in overbuilding.

A best practice urban PPP requires the following:

- A long-term partnership between public agencies and private parties;
- Conceptualization in the context of an urban strategy;
- Partnership in design, project preparation, finance, construction, and operations and maintenance; and
- May or may not involve revenue generation, depending on type of project.

The Case of Harbin

From the presentation of Cai Jianming, Chinese Academy of Science; and Douglas Webster, Arizona State University

Harbin has a municipal population of 10.6 million (Census 2010).[7] This is a modest increase of 13.1% in the 2000 population. . The low inter-census population growth rate ranks Harbin as 27th in the list of 54 largest municipalities in terms of demographic growth rate. The population has actually shown signs of declining; the municipal population declined by 37,000 people from 2007 to 2010. The urbanization level of 47% (2010) is lower than the 51% for the PRC as a whole.

Harbin is relatively poor by the country's metropolitan standards, when ranked by GDP per capita Foreign direct investment (FDI) is also low in Harbin by PRC standards. Only Jinan has a lower FDI per capita among equivalent cities.

But Harbin is catching up. The growth rate in GDP per capita is high, at 14.6% annually in nominal terms from 2001 to 2011. Growth in FDI is even higher, increasing by 3.4 times from 2007 to 2011. The number of domestic tourists rose by 4.8 times from 2001 to 2011, with the number of international tourists rising by 1.8 times over the same period.

With the city proper population growing slowly and expected to peak at approximately 7 million in 2030, infrastructure demand associated with overly rapid demographic growth is not the issue.

The issue is the need to improve the quality and efficiency (including financial efficiency) of development. Public investment should be oriented toward providing a higher value, cleaner economy that can facilitate rebuilding the economy.

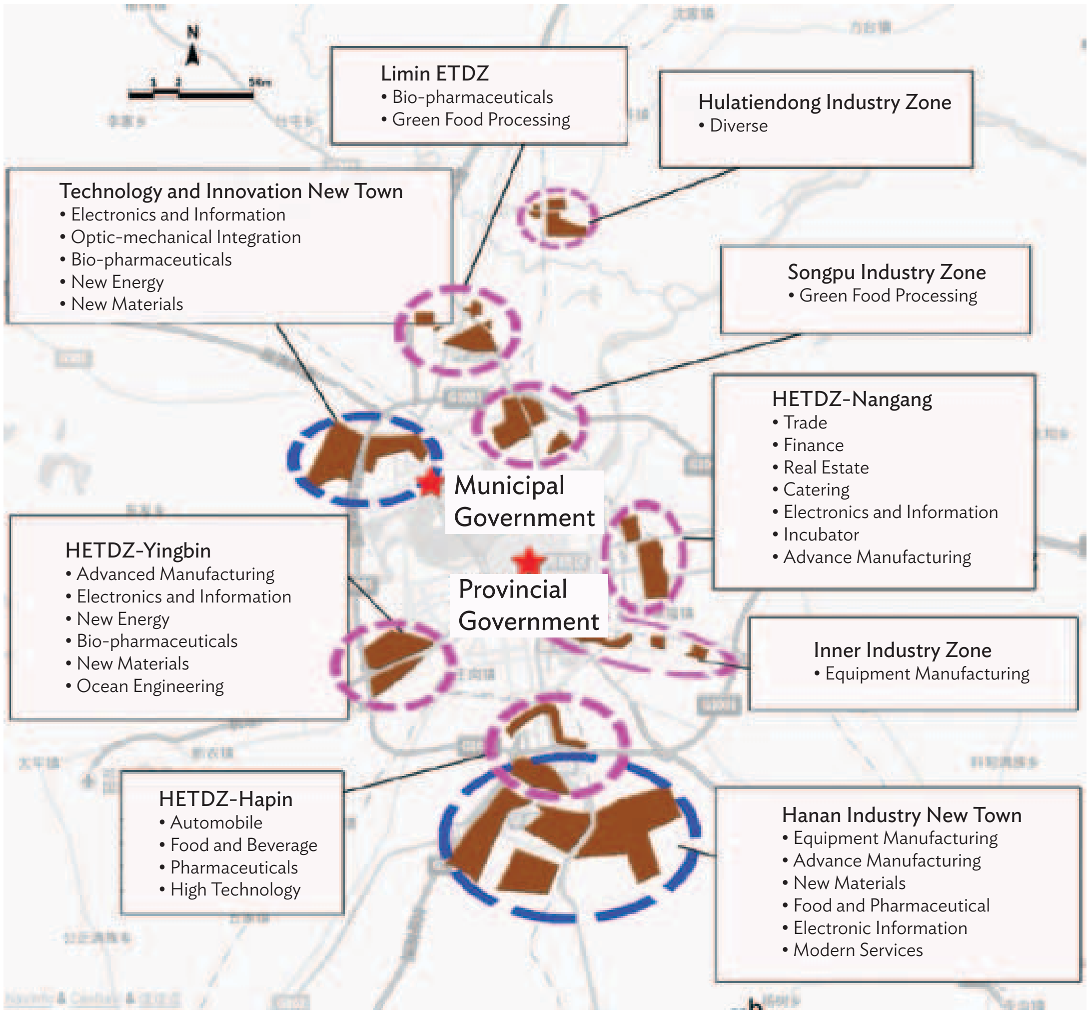
Harbin's priority needs are as follows:

- Affordable housing for the young and migrants;
- Improving energy efficiency thereby reducing pollution and green house gas emissions;

6 National Development and Reform Commission. 2012 Report on [the] PRC's Urbanization. Draft. Beijing.

7 http://www.geohive.com/cntry/cn-23.aspx. Sourced from Heilongjiang Provincial Bureau of Statistics. 2001 and 2011. China Statistics Press.National Bureau of Statistics of China. 2001 and 2011. China Statistics Press.

Economic Base of Harbin



Note: The Harbin Economic and Technological Development Zone (HETDZ) is situated in Harbin, the capital city of Heilongjiang Province. The zone has a planned area of 30 square kilometers, and three centralized parks under its administration.

Source: ADB. 2014. Positioning Harbin for Twenty-First Development. Prepared by Douglas Webster, Cai Jianming and Wen Ting.

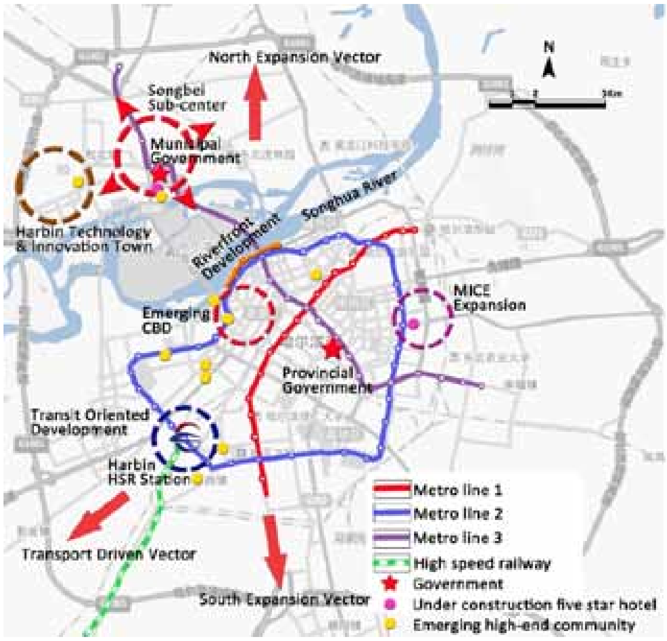
- Basic public services, particularly practical vocational education;
- Urban platforms that provide a basis for economic restructuring; and
- Make existing development zones more attractive and efficient rather than developing new zones.

Harbin faces capital constraints in addressing these needs, which are compounded by a need to repay existing loans and bonds. At present, resources are diluted among too many economic development zones, and there is residential overbuilding in some areas. Together, these factors are contributing to infrastructure inefficiencies.

PPPs provide a potential solution to the problem. The performance-based management model that underpins a PPP can result in more cost-effective service delivery. PPPs can deliver sound planning and operations, and sustainable financial management.

There are many promising PPP opportunities in Harbin. Further development of Harbin's new metro system will dramatically change and concretize Harbin's

Spatial Dynamics of Harbin



Source: ADB. 2014. Positioning Harbin for Twenty-First Development. Prepared by Douglas Webster, Cai Jianming and Wen Ting.

spatial structure. A PPP approach associated with changing land and property market dynamics would create enormous opportunities for land value capture that would maximize revenue streams from metro operations. A PPP approach would avoid a situation where metro development soaks up scarce public capital.

There are also opportunities in the development zones, which already employ PPP-like approaches and are receptive to the PPP model. There are many specific sites suited to more intensive development through a PPP approach, such as the area around the high-speed rail station, the Songbei high technology zone, and the Hanan new town.

To realize these opportunities, however, it will require more attention to capacity building. The principles of PPPs are not well understood in Harbin. The PPP model is viewed as a means of accessing finance, rather than the innovation and knowledge transfer benefits typically associated with PPP interventions.

Innovation in Public–Private Partnership Projects

China Gas and Natural Gas Distribution

From the presentation of Eric Leung, Deputy Managing Director and Chief Financial Officer, China Gas Holdings Limited

The heavy reliance of the People's Republic of China (PRC) on coal for heating and power generation creates a health hazard for its citizens. Air pollution from coal is one reason why people living in the north of the PRC have shorter lives on average. Coal accounts for 68% of the country's energy usage, compared to 30% globally. Natural gas is a less hazardous alternative. But gas accounts for only 5% of the country's energy usage, compared to 24% globally.[8]

ADB has supported the development of natural gas distribution systems by China Gas Holdings Limited (CGH) through the provision of $200 million (equivalent) in loans. A service that started with eight cities in 2003 has now grown to 196 cities. Servicing 27 million people in 21 provinces, CGH is providing clean energy solution to cities. A spider web-like distribution network is now in place across the PRC based on concession agreements with municipalities.

Source: ADB staff.

CGH engages in (i) the investment, operation, and management of city gas pipeline infrastructure; (ii) the distribution of natural gas and liquefied petroleum gas (LPG) to residential, commercial, and industrial users, and (iii) public transport (such as buses and taxis).

Before 2004, the cities typically had their own gas company that was funded and mandated by the government. Coal gas was used instead of natural gas. Since 2004, CGH has helped cities switch from being a heavy coal user to a natural gas user.

Under the PPP arrangement, CGH takes industry, construction, funding, and operating risks. Governments retain those risks that they could best manage because they control the source of risk. These retained risks include pricing and policy risk (e.g., policy directions that require certain users to switch from coal).

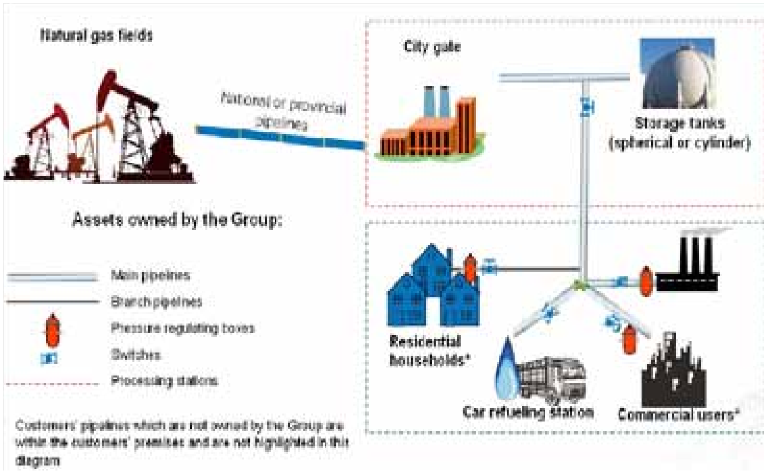
CGH is typically awarded a 30-year concession. For such a long-lived PPP to succeed there must be a close cooperation between the local government and CGH. A wide range of government agencies are included within the cooperation, typically under the guidance and coordination of the mayor's office. Regional gas suppliers are also involved so as to ensure the city can access the required natural gas, which is in short supply.

The expansion of CGH has been supported by ADB through the provision of loans and support to strengthen corporate governance, and social and environmental safeguards. ADB has also arranged commercial bank syndication under B-loan arrangements.

The total investment mobilized to date by CGH is CNY34 billion. This investment is providing a range of benefits including less pollution and a lower cost of fuel. CGH's intention is to expand operations to at least another 100 cities.

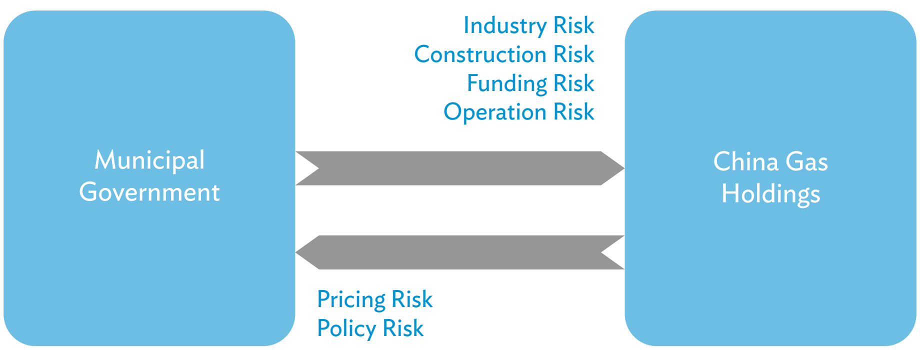
[8] BP. 2013. *Statistical Review of World Energy*. http://www.bp.com/statisticalreview.

Public–Private Partnership at the Municipal Level by China Gas Holdings



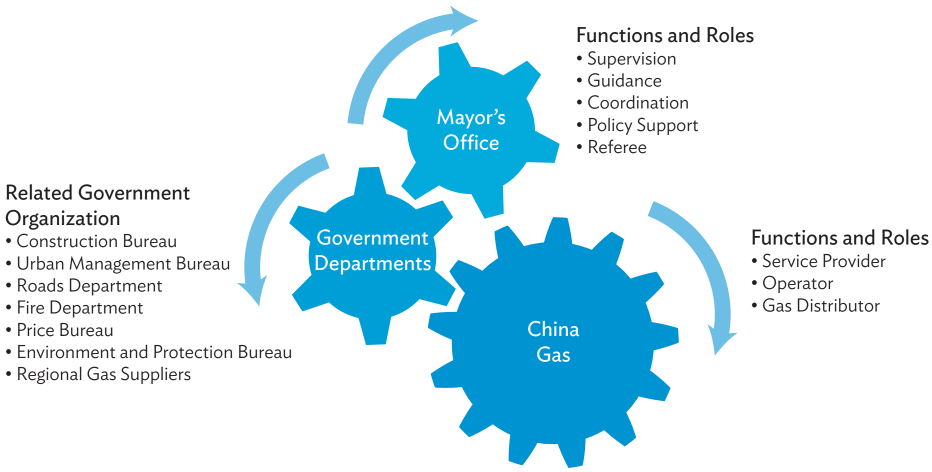
Source: China Gas Holdings.

Public–Private Partnership at Municipal-Level Cooperation



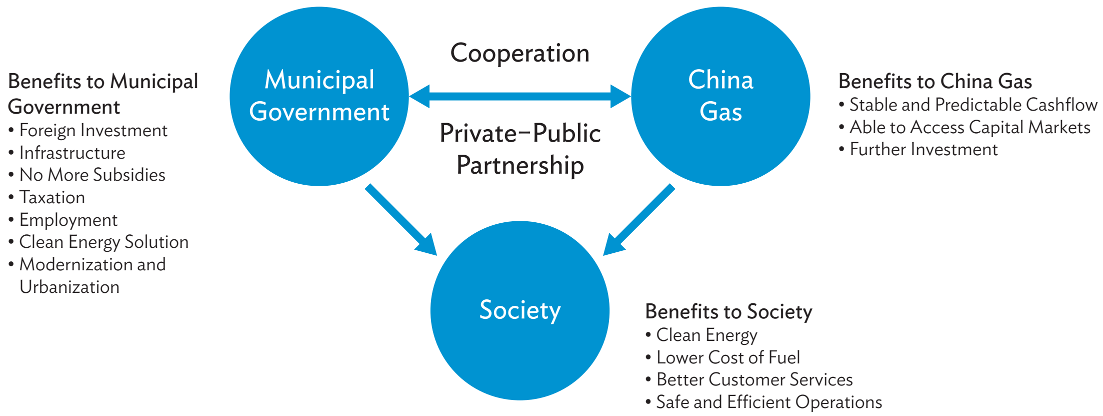
Source: China Gas Holdings.

Public–Private Partnership at the Municipal Level—Risks Reallocation



Source: China Gas Holdings.

Benefits of Public–Private Partnership



Source: China Gas Holdings.

The Beijing Metro

From the presentation of Yi Min, Chief Executive Officer, China MTR Corporation Ltd

Beijing's Metro Line 4 was developed by the Beijing Municipal Government as a PPP. The main private sector partner to this partnership arrangement is the China MTR Corporation Ltd (China MTR). This was established in 1975, and listed on the Hong Kong Stock Exchange in 2000. Although a commercial entity, China MTR remains 76.5% owned by the Government of Hong Kong, China, hence, remains a state-owned enterprise (SOE). In 2007, China MTR merged with the Kowloon–Canton Railway Corporation, and by the end of 2012 had a market value of HK$163 billion.

China MTR operates nine metro lines, an airport line, and a light-rail. Operations cover Hong Kong, China; Beijing; Australia; and Europe. The total length of the line is 218 kilometers (km), and the daily patronage is 5.1 million persons.

The Metro Line 4 PPP is held by the Beijing MTR, which is owned by the following: China MTR (49%); the Beijing Capital Group Co. (49%), which is an SOE of the Beijing Municipal Government; and Beijing Infrastructure Investment Co. Ltd (2%), another SOE.

The 29 km long and 24 stations of Metro Line 4 were constructed at a cost of CNY15.3 billion. The concession agreement was signed in 2006 and operations commenced in 2009. A feature of the PPP is the separation of funding. Construction of the track and stations—Part A—was funded by the Beijing Municipal Government while the rolling stock and other equipment—Part B—were financed by the PPP company. The Beijing MTR invested CNY4.6 billion in the construction of Part B.

The risks taken by Beijing MTR relate to the construction cost, interest and exchange rates, operation costs, patronage risk, and force majeure.

The concession period is 30 years. Over this period, the payment to Beijing MTR is linked to patronage and ticket fare revenue. As a market-oriented project, the PPP requires a reasonable rate of return. Government subsidies are needed to help achieve the target rate of return.

The concession agreement of Line 4 sets the initial ticket price of each operation, and a mechanism for periodically reviewing and adjusting the estimated ticket price. The Beijing Metro ticket fare (currently CNY2) is decided by the Beijing Municipal Government. When the actual ticket cost is higher than the ticket price (after adjusting), the government shall pay the difference as a subsidy to the PPP company. If the actual ticket price is higher than the estimated cost, the excess will be shared by the PPP company and the government.

Beijing Line 14 is also being developed as a PPP on a similar basis. The 47 km long and 37 stations are being developed at a capital cost of CNY50 billion. The CNY15 billion Part B is the responsibility of Beijing MTR. The initial phase of line 14 opened in May 2013, and the remainder is to open in 2015. Again, the concession period is set at 30 years.

The success of the Beijing Metro PPPs rests on the following:

- Clear and consistent policies based on Beijing's urban infrastructure franchise regulations;
- A strong economy to ensure sufficient patronage and revenue from associated commercial developments. This is required to meet the investor's rate-of-return requirements;
- A stable market environment comprising financing, tendering, bidding, and insurance systems;
- An efficient organizational structure for the three shareholders;
- The availability of essential professionals and experts; and
- Reasonable risk-sharing mechanisms.

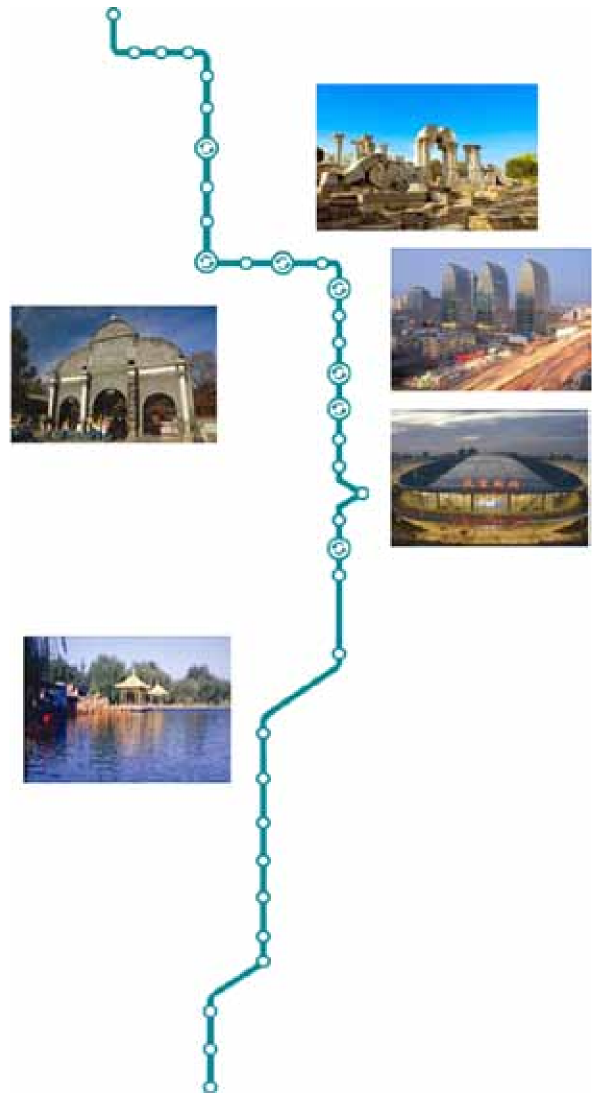
The use of the PPP model in Beijing Metro has offered a number of benefits. Firstly, it has allowed the Beijing Municipal Government to overcome a financial shortage and speed up the development of essential infrastructure. Secondly, it has saved costs.

The project's post-evaluation report by the Beijing Development and Reform Commission found that the PPP saved CNY4.6 billion—CNY600 million in additional investment, and CNY4 billion in replacement and renovation costs. A key source of the cost saving is the enhanced motivation of the PPP company to save costs while ensuring project quality and safe operations.

The new metro lines are also boosting the city's competitiveness, and transferring technology and experience from Hong Kong, China and international markets.

Beijing Metro Line 4

- One of the arterial lines in Beijing
- 28.2 kilometers in length
- 24 stations
- 11 interchange stations (4 stations are yet to be constructed)
- A run time trip of 48 minutes
- Connects the education area (Peking University, Tsinghua University, and Renmin University), high-tech area (Zhongguancun), and tourist attractions (e.g., Summer Palace, Beijing Zoo)



Source: China MTR Corporation Limited.

There is substantial potential to expand the use of PPPs in developing the country's metro systems. Outside Beijing, for example, China MTR has already partnered with the Hangzhou Metro Group to construct the Hangzhou Metro Line 1. This 48 km line with 31 stations cost CNY22 billion, and opened in 2012 with a 25-year concession.

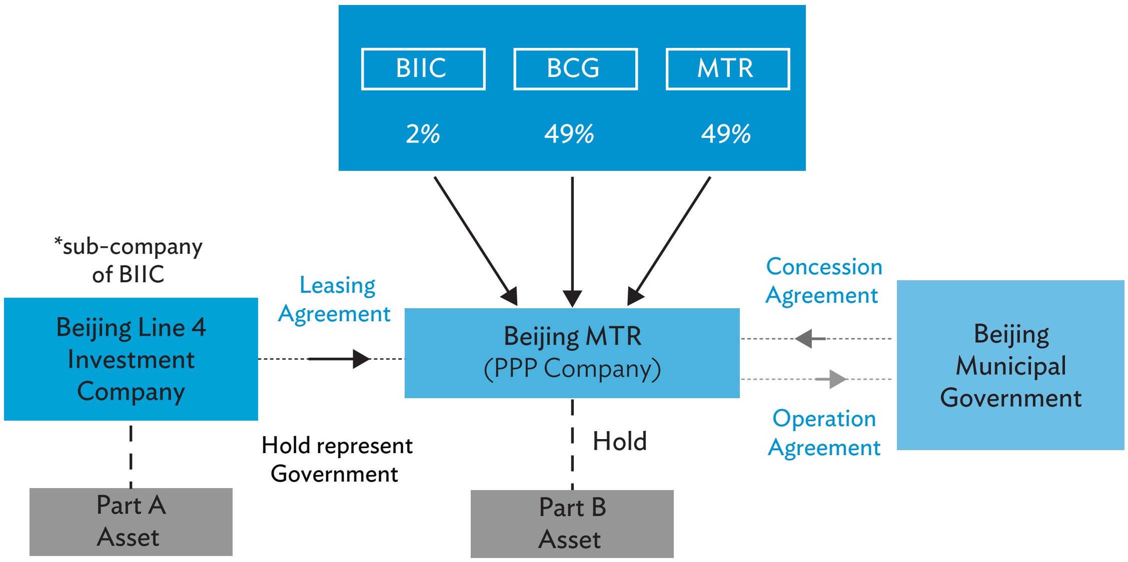
To realize this potential, it will be important to ensure market-oriented ticket fares, a deep understanding of the PPP model, and the active participation of all parties to a PPP.

Metro Public–Private Partnerships in Hong Kong, China

From the presentation of Andrew McCusker, recently retired Director of Operations for the Hong Kong Mass Transit Railways Corporation

Governments throughout the world are returning to rail as a way of providing sustainable urban transport. The private sector is recognized as key partner in these urban rail projects.

Beijing MTR: A Public–Private Partnership Company



Source: China MTR Corporation Limited.

Bringing the private sector into rail projects requires close attention to the investor's need for adequate returns. This attention must start from the initial concept and continue through the build and operational phase, and into the renewal phase.

The benefits of bringing the private sector into rail are well recognized and these include the following:

- Efficiency, which saves time and resources;
- The introduction of commercial elements (e.g., shop, residential and other developments) to enhance the viability of a project;
- Improved risk management;
- Independent and multiple verification of project feasibility;
- Innovation, such as through the introduction of new technology;
- Reduced public sector staffing levels, and associated costs savings;
- Reduced political pressures on the setting of fares; and
- Best practice approaches to asset management.

The experience of Hong Kong, China demonstrates what is required for success. Five lines are currently being developed as PPPs: (i) the 3 km West Island Line, (ii) the 7 km South Island Line (East), (iii) the 2.6 km Kwun Tong Line Extension, (iv) the 26 km Express Rail Link, and (v) the 17 km Shatin to Central Link.

The West Island Line from Sheung Wan to Kennedy Town is a "community railway" incorporating significant input from local district residents. It contains many features that preserve local heritage and provide urban renewal opportunities. The project agreement was signed in 2009 and the line is targeted to open in 2014. It will reduce the travel time from Kennedy Town to Sheung Wan to only 8 minutes and from Kennedy Town to Tsim Sha Tsui to 14 minutes.

The South Island Line (East) was gazetted in 2009 and is now undergoing public consultation in advance of government authorization.

The Kwun Tong Line Extension will run from the existing Yau Ma Tei Station of the Kwun Tong Line to Whampoa via Ho Man Tin, which will be an interchange station with the East–West Corridor of the Shatin to Central Link.

The Express Rail Link is the Hong Kong, China section of the Guangzhou to Shenzhen–Hong Kong Express Rail Link. It will provide high-speed, cross-boundary rail services connecting Hong Kong, China to Shenzhen, Guangzhou and the 16,000 km high-speed intercity rail network in the mainland. Construction commenced in 2010, and the line is expected to start service in 2015.

The preliminary design of the Shatin to Central Link was completed in 2009.

These five projects are being developed under a range of models. Two lines are being developed as a rail plus property PPP in cooperation with China MTR. The "plus property" component is intended to fill funding gaps. It provides a potential next step for the country's metro PPPs.

Under the rail plus property PPP, China MTR will pay the full market price of the sites, the development cost of the property developments, and the construction and operating cost of the railway. China MTR will develop the sites both horizontally and vertically. It will bear the risks of financing the railway and property development, operating the railway, and the market fluctuations in rail and property markets. China MTR will, in return, receive the growth in the value of the land it purchases, the fare from the rail line, and non-fare revenues from the associated commercial developments.

The attraction of this model for Government of Hong Kong, China is that it removes the need for a direct subsidy to the project. The government also benefits from the general increase in land prices and increase in the value of its shares in China MTR.

- This experience establishes the following keys to a successful partnership on rail PPPs:
- A good partner with good knowledge of the local context, a willingness to risk a sustainable amount of capital early in the project, and the financial strength to overcome expected and unexpected problems;
- A good project rational that makes strategic and economic sense, and has political support and that of local financial institutions; and
- Good returns.

Hong Kong, China's Subway Lines

Source: China MTR Corporation Limited.

MTR Ownership Model

Government Capital Contribution Model

Rail plus Property Model

West Island Line

- Construction progressing as planned
- Target to commence service in 2014

South Island Line (East)

- Project Agreement signed in May 2011
- Development right for a site at Wong Chuk Hang was granted
- Construction in progress
- Target to commence service in 2015

Kwun Tong Line Extension

- Project Agreement signed in May 2011
- Development right for a site at Ho Man Tin was granted
- Construction in progress
- Target to commence service in 2015

Source: China MTR Corporation Limited.

Social Sector Public–Private Partnerships in the United Kingdom

From the presentation of Simon Booker, Director, Infrastructure Finance, KPMG

While there is no single definition of PPPs in the United Kingdom (UK), at its most basic level, it can be thought of as a lease for an asset that includes guaranteed maintenance.

The key objectives and benefits of PPPs are well known, as follows:

- Accelerate the delivery of infrastructure.
- Ensure budgetary certainty over the life of a contract.
- Ensure that payments are dependent on service delivery.
- Ensure that assets are maintained.
- Adopt a whole life view of service delivery, and not only look at the assets.
- Ensure best value through the transfer of some risk to the private sector.

PPP is one of several procurement routes in the UK, where it accounts for only 10%–15% of infrastructure development.

PPPs have undergone substantial evolution in the UK in recent decades. In the early stage, PPP activity was concentrated in transport. Road PPPs, in particular, were attractive to investors. The PPP journey probably started with roads because there were relatively easy transactions available. As the market developed and regulations improved, it has been adapted to apply in new areas such as the social sectors.

There are different levels of complexity in social sector PPPs. The simplest is a serviced infrastructure. Under a PPP in health, for example, the private partner provides and maintains the buildings used by a hospital or other health facility. It may also provide some basic services such as catering and gardening.

The next level of complexity is to prepare discrete packages of services. For example, the provision of medical equipment in a new hospital, pathology and

Service Concession Model

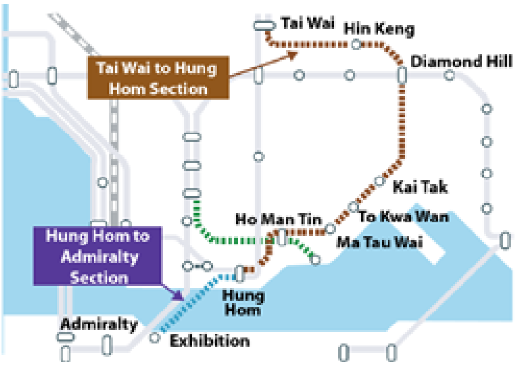
Project Cost 100% Funded by The Government.
Details of the O&M Concession to be agreed.

Guangzhou–Shenzhen–Hong Kong Express Rail Link (HK section)

- Entrustment Agreement signed with Government in January 2010
- Construction progressing as planned
- Target to commence service in 2015

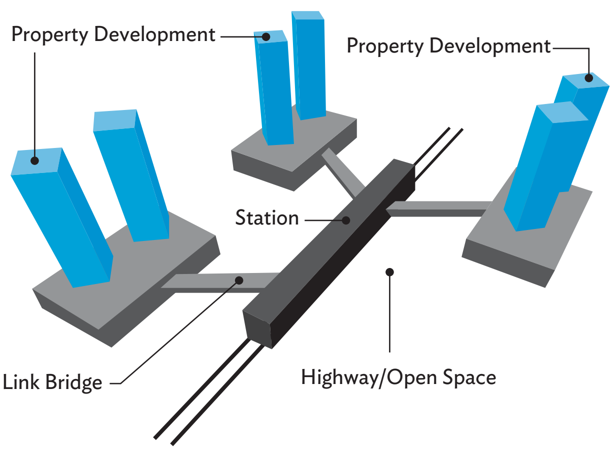
Shatin to Central Link

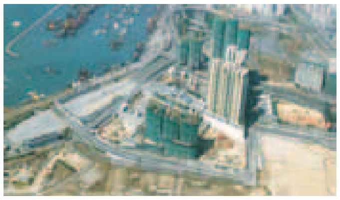
- Entrustment Agreement signed with Government in May 2011 for advance works in Admiralty and Ho Man Tin
- Detailed design of the Tai Wai to Hung Hom section was substantially completed



Source: China MTR Corporation Limited.

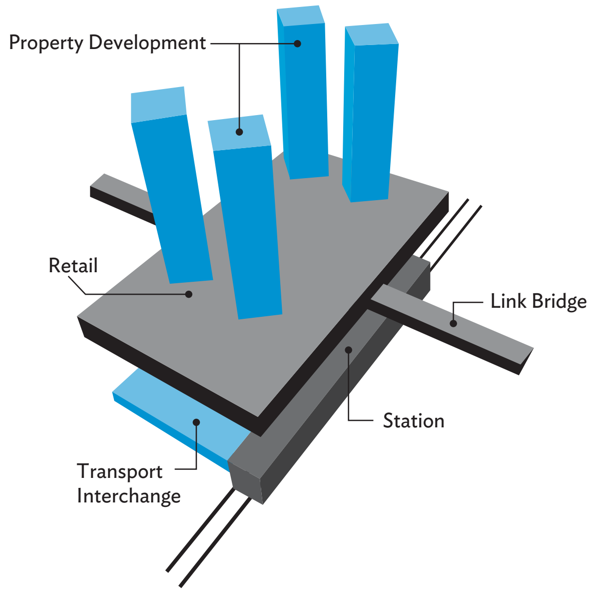
Horizontal Integration

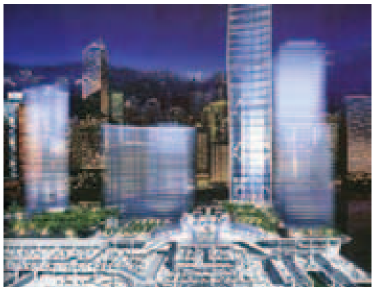


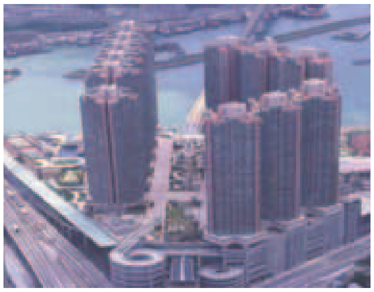


Source: China MTR Corporation Limited.

Vertical Integration

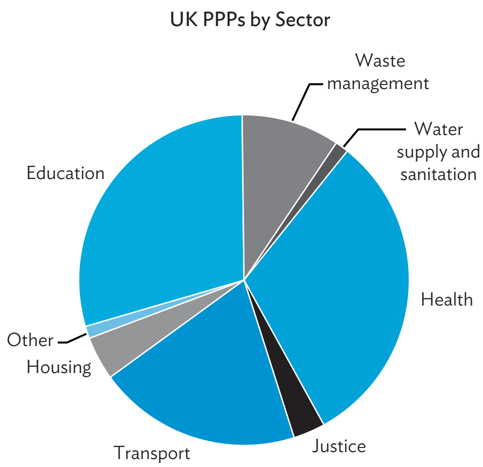






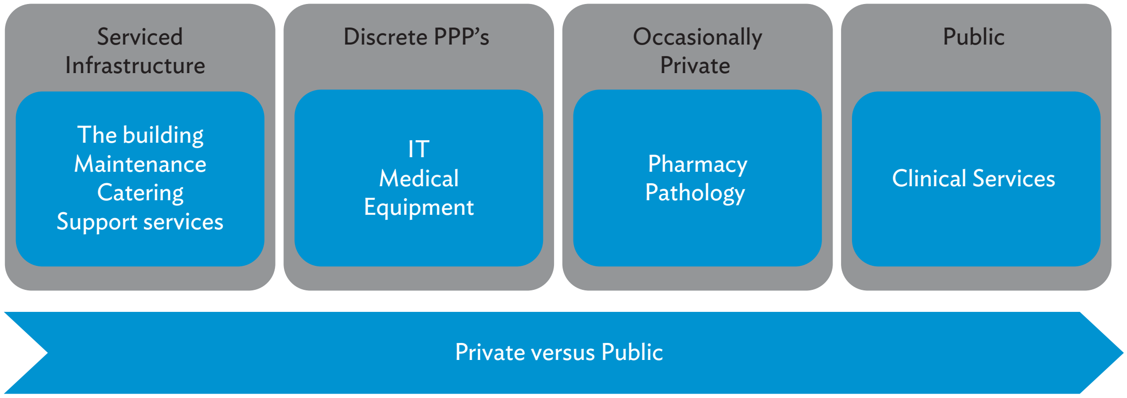
Source: China MTR Corporation Limited.

Public–Private Partnerships in the United Kingdom, 1987–2012



Source: HM Treasury. 2012. UK Private Finance Initiative Projects: Summary Data as of March 2012.

Private and Public Roles in Hospitals



Source: Simon Booker.

pharmacy services can be bundled into a PPP. This model is currently being used by the Government of Hong Kong, China for nine new hospitals.

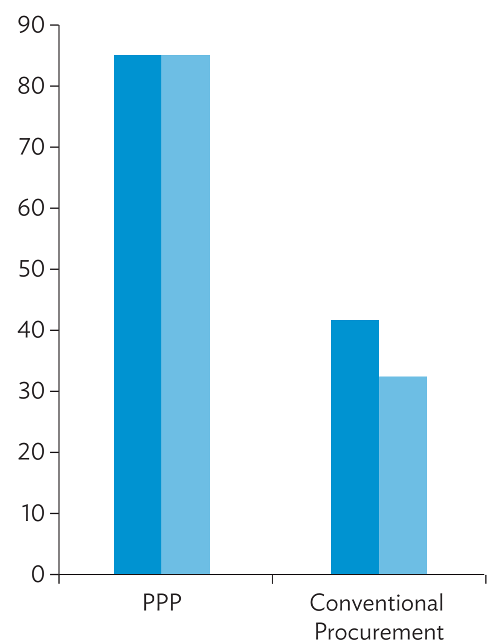
Clinical services are normally provided by the public sector under a health PPP. However, they can potentially be provided by the private sector. This would constitute the most complex form of health PPP.

Education PPPs have been promoted in the UK using similar approaches. That is, the simplest education PPP provides the school buildings only, with the provision of education services normally the responsibility of the public sector.

Schools are a major component of the Private Finance Initiative (PFI) program in the UK. Approximately 225 education projects with a total value of approximately £10 billion have been completed. These have typically been for very simple PPPs that concentrate on providing school buildings and very basic services. Individual school projects are too small to be viable as a PPP, and they are mostly "grouped" into a larger school project (e.g., 20 or more school activities may be grouped into one project).

How have these different PPP models performed? The results are encouraging, with the UK PFI generally more successful than conventional public procurement. A high percentage of PFI projects are delivered on time and on budget. A 2003 study conducted by the UK

Delivery on Time and On Budget: Public–Private Partnership Market in the United Kingdom



Source: United Kingdom Comptroller and Auditor General. 2003. *Public Finance Initiative Construction Performance.* London (February).

National Audit Office found that 76% of PFI projects were completed on time, and 78% were completed on budget. By contrast, for conventional procurement, only 30% of projects were completed on time and only 27% were completed on budget.

It must be pointed out that it took the UK 20 years or so to develop the institutions, legal frameworks, business strategies, and capital market instruments needed for successful PPPs. The UK is also characterized by a strong, centralized procurement system that can ensure project quality. While lessons can be learned from the UK, projects in other countries need to be structured to meet the unique features of the market they are in.

It is also important to keep in mind the checklist for successful project development, which are

- strong government support,
- a stable legal and regulatory framework,
- a contractual framework that reflects the economics of the project, and
- the rational allocation of risk among parties.

Perhaps the key issue is the allocation of risk. Allocating too much risk to the private sector partner can make the cost of a PPP become too high. But allocating too little risk to the private sector partner can also make them earn excessive profits and undermine confidence in a PPP program.

Education Public–Private Partnerships

From the presentation of Norman LaRocque, Senior Education Specialist of the Southeast Asia Department, ADB

ADB has an active pipeline and portfolio of technical and vocational education and training (TVET) projects in the PRC that are creating human capital. PPPs provide a range of ideas on how such projects can be delivered.

There are three main types of education PPPs:

- Service delivery PPPs, under which the government have contracts with private operators to deliver teaching services or to manage public school, TVET colleges, institutes, and universities;
- Contracting with the private sector for the provision of education infrastructure, such as school buildings; and
- A voucher or subsidy program.

Under the first type, the education service is usually provided by the private sector from a publicly owned facility. The PPP is usually in the form of a management contract. Payment to the private sector partner is often made on a per student basis or as a lump sum.

The second type of education PPP where facilities are built and maintained by the private sector is the most common type. This works like a concession-type arrangement based on the facilities only. The public sector partner provides the actual education services.

The voucher or subsidy program is a form of entitlement provided to students. Students use the voucher to pay part of their tuition fees at registered schools, training colleges, institutes, or universities. Under this PPP, the government's role is limited to providing financial assistance and overseeing the quality of registered education providers.

There are many examples of such PPPs that offer a rich experience for the PRC to draw on.

The Penang Skills Development Center in Malaysia, for example, provides a hybrid model of private management of a public institute. It is located within three industrial zones, and focuses on providing the skills needed within the zones. It is a partnership among the academia, the private sector, and the government. The government provided land and infrastructure, and regulates the facility. Most financing is provided by the private sector. More than 150,000 students have graduated and found employment within the industrial zones.

The Republic of Korea introduced a build–transfer–lease system for education in 2005. Modeled on the UK PFI, the private sector finances the design, builds, and undertakes the maintenance of these schools for 20 years. The government makes availability payments to the private sector for 20 years, and the facilities constructed and financed by the private sector are ultimately transferred to the public sector. The public sector delivers education using the facilities that are built, managed, and maintained by the private sector. It may be a public institution, but the building and the institute itself are managed by the private sector. This PPP is used in basic and secondary education and TVET.

In the Lao People's Democratic Republic, the government is proposing to provide land to a private operator to construct a training institute that will offer regional and international-level training in hospitality and tourism. This will provide an alternative to the low-quality hospitality training currently offered by public and private institutes.

The proposal is for the government to build the training institute on half of a piece of land, with the private sector partner to be provided a concession to build a hotel on the other half. Some of the revenue from the hotel operation will be earmarked for the training institute to help fund its operation. This will supplement tuition fees and other miscellaneous revenue. This is one way of ensuring revenue for the training institute without recourse to the budget. The applicability of the concept is also being explored in Myanmar and Cambodia.

Education is very well suited to the PPP model. In comparison, infrastructure projects can raise complicated resettlement and land acquisition issues. Working on schools, TVET colleges, and universities, is much simpler from this perspective.

PPPs are undertaken for a range of reasons, such as pursuing better quality, more relevant, and more efficient services. The common ground in PPPs is an acceptance that the government can shift its role from sole funder, operator, and regulator to focus on regulation and give the private sector more responsibility for the funding and operation of education facilities. Giving the private sector more autonomy does not mean the government is shifting its responsibilities. Autonomy should be subject to accountability and an outcome focus backed by good regulation. This will promote high quality standards and innovation, and help avoid unintended consequences.

Social Housing in the People's Republic of China

From the presentations of Wang Wenlin, Department Director of Sinohydro Group Ltd; and Zheng Kangbin, Senior Financial Specialist, PSOD, ADB. Case: Social Housing PPP

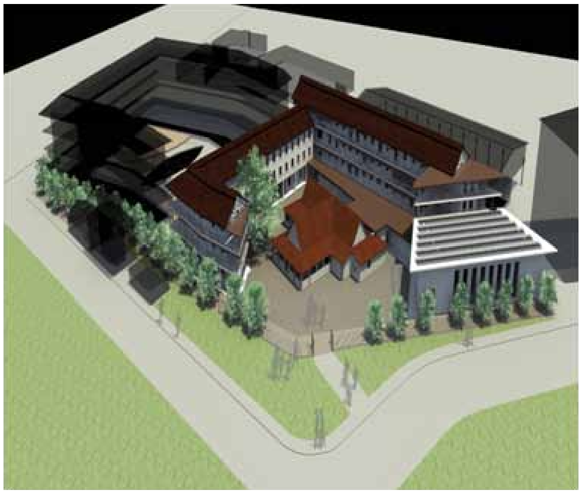
The Tianjin Wuqing Land Development and Social Housing Project commenced development in 2009. The build–transfer project involves the removal of 1 million square meters (m^2) of old housing spread over 23 administrative counties, and the relocation of 23,000 people to 1.3 million m^2 of new housing. The total investment for the project is CNY8 billion, making it the largest build–transfer project of its type issued in 2009.

The new housing is within a complex designed by experts in green and sustainable development. It provides apartments that vary from 60 m^2 to 130 m^2 in one, two, and three-bedroom configurations.

The 6-year project is freeing up development of land for business use. The industrial park that has been established is expected to generate value-added of CNY20 billion, tax revenue of CNY5 billion, and 50,000 jobs.

The PPP model can be used to enhance the performance incentive of the build–transfer model and introduce a life-cycle approach to social housing. The PPP model is

Proposed Lao National Institute of Tourism and Hospitality Public–Private Partnership, Vientiane, Lao People's Democratic Republic



Source: ADB Staff.

- Not-for-profit training institute.
- Curriculum benchmarked on ASEAN good practice and competency standards.
- Key elements:
  - Government of the Lao PDR provides free land to LuxDevelopment.
  - LuxDevelopment constructs and operates the training institute on half of the land.
  - Private company operates commercial hotel on the other half of the land under a concession from the government. There is no lease payment.
  - Payment in lieu of a lease payment is made by hotel operator directly to the training institute to finance its operation.
  - The training institute is financed by tuition fees, the hotel payment, and other revenues.

Education and Training Public–Private Partnerships		
Type		**Examples of Basic/Secondary Education and TVET**
Service Delivery PPPs	School	• Education Service Contracting, Philippines • Foundation Assisted Schools, Pakistan • Gyanodaya Senior Secondary Schools, India • Promoting Private Schooling in Rural Sindh, Pakistan (World Bank Project)
	TVET	• Skills Contracting Program, Lao PDR (ADB Project) • Reform of Technical and Vocational Training, Kingdom of Saudi Arabia • Specialist Skills Contracting Program, Lao PDR (ADB Project) • Basic/Mid-level Skills Training Program, Nepal (ADB Project) • Mid-Level Skills Training Project, Timor-Leste (ADB Project)
Management Contracts	School	• Concession Schools, Colombia • Independent Schools, Qatar • Charter/Contract schools, United States • Khazanah Trust Schools, Malaysia • Partnership Schools, New Zealand • Free Schools, United Kingdom
	TVET	• Penang Skills Development Center, Malaysia (Hybrid)
Facility-only PPPs	School	• Private Finance Initiative, United Kingdom • Public–Private Partnerships for New School Property, New Zealand • Alberta Schools Alternative Procurement/New Schools Project, Alberta, Canada • New Schools Public–Private Partnerships , New South Wales, Australia • Public–Private Partnerships for School Infrastructure Project, Philippines
	TVET	• Southbank Institute of Technology, Queensland, Australia • Institute of Technical Education College West, Singapore • Build-Transfer-Lease Program, Republic of Korea • Lao National Institute of Hospitality and Tourism, Lao PDR (Proposed)
Voucher/Subsidy Programs	School	• Programa de Ampliacion de Cobertura de la Educacion Secundariavoucher program, Colombia • Voucher scheme, Chile • Voucher Scheme, Qatar • Senior High School Voucher Program, Philippines (Proposed)
	TVET	• Training Assistance Voucher Program, Lao PDR (ADB Project)

ADB = Asian Development Bank, Lao PDR = Lao People's Democratic Republic, TVET = technical and vocational education and training.
Source: ADB staff.

particularly well suited to public rental housing, which can bring affordable housing within reach of those that cannot afford to buy a property.

The provision of public rental housing is an important component of the commitment of the government's Twelfth Five-Year Plan, 2011–2015 to build 36 million units of social housing and support 20% of those families facing housing difficulties.[9]

The financing needed to meet this target is over CNY5 trillion. Local governments, however, have

[9] Government of the People's Republic of China. 2011. Twelfth Five-Year Plan for National Economic and Social Development of the People's Republic of China, 2011–2015. Beijing.

neither the financial resources, expertise, or experience to develop affordable rental apartments. Assistance is required to formulate and pilot social housing PPPs that suit local circumstances while learning from international experience.

Financial assessments by ADB have confirmed the affordability of apartments of 40–60 m^2 in size. The PPP contract can provide a mechanism to ensure that developments are well planned and adhere to the principles of clean development while ensuring safe, well serviced communities. Such public rental housing can target groups in need, such as low-income families, recent graduates, and migrant workers.

A successful PPP will require support to ensure an adequate credit rating of projects, ensure a coordinated approach to support across government agencies, and to attract high-quality private sector partners. While a social housing PPP that can be fully funded from tenant rents may be achievable in some cases, additional budget support will typically be required.

Innovation in Public–Private Partnership Financing

India's Story

From the presentation of Pradeep Singh, Vice-Chairman and CEO, Infrastructure Development Finance Company, India

It is tempting to say that everything is perfect in India's public–private partnerships (PPPs), that we are doing everything very well, that we got everything sorted out, and that lots of progress have been made. It is tempting to say, but it will not tell the full story. We have made progress and we have come up with many PPP projects, and many innovations, models, concessions, contracts, and new financial instruments. But all is certainly not well. We are facing problems and challenges. A lot of people think we have made mistakes, such as weak regulations that can allow corruption in PPP projects. In fact, right now, there is considerable questioning as to whether PPPs are a good path to follow or not.

It is important to make clear that a PPP is not fundamentally about financing. This may sound like a contradiction to many, as governments normally think of PPPs when they are short of money. Financing is certainly a very important ingredient of a PPP and its success.

Source: ADB staff.

However, the driver of a PPP should be efficiency gains, improvements to performance, higher accountability, superior technology, superior management, superior outcomes, better quality, and lower prices. These are the outcomes that a PPP is trying to achieve by bringing in the private sector. In the process, financing will also come.

It is important to recognize that the private sector does not have access to some secret garden that grows money. It is the same money available to the private sector.

A government can take money from the road user and build a road. Or the government can let the road users keep their money and get the private sector to build the road. Both ways offer a solution; the road users get the road. But under a PPP, the private sector will be accountable for its performance, bring in better technology, and will minimize cost because that is how it will make profit. This is the superior outcome that a PPP can provide.

These observations lead to the importance of balancing the many issues facing a PPP.

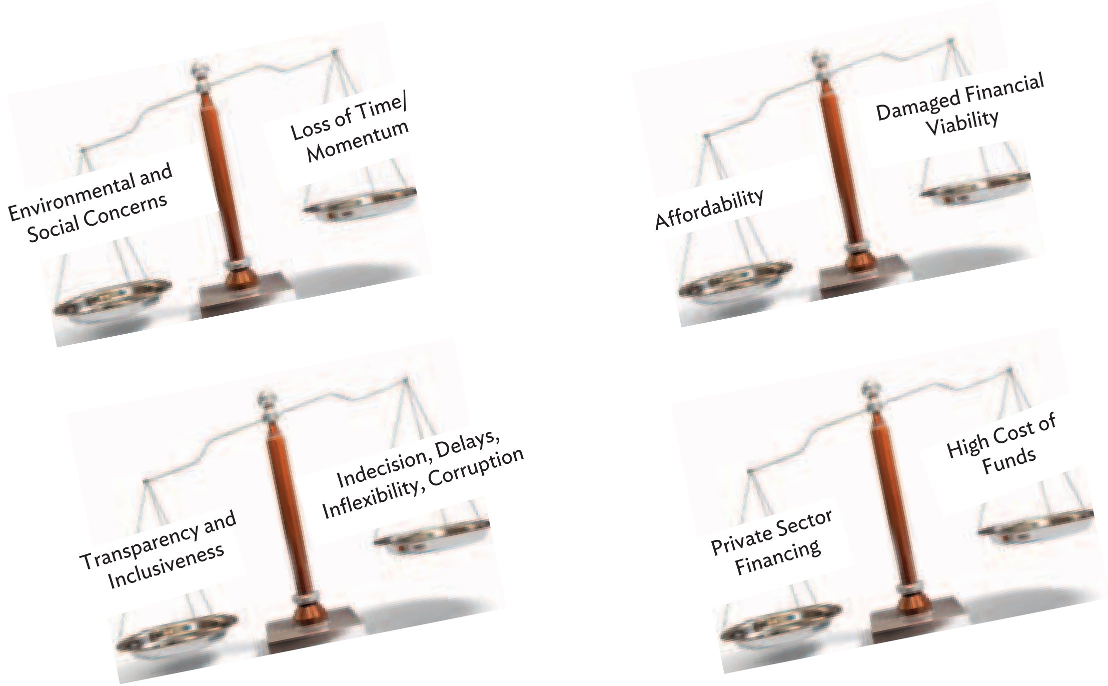
In India, for example, there are strong environmental and social concerns; we do not want our poor people to lose their land, we do not want our environment to be damaged, etc. These concerns have led to a huge amount of regulation and processes that absorb time. Obtaining the environmental clearance for a thermal power plant takes 3–4 years, and when land is required, it can take 2 years to compensate every farmer who is being moved from that land. Environmental and social concerns need to be balanced against timely project completion.

Is it sensible to choose affordability over financial viability? On the one hand, public services provided cannot be very expensive, but on the other hand, if tariffs are too low, there will be a financial viability problem and the project may not be bankable.

On the one hand, there must be transparency, participation, and inclusiveness, but providing these can lead to extra processes and delays.

It is attractive to get extra financing from the private sector, but private sector financing is often believed to

The Public–Private Partnership Balancing Game



Source: Pradeep Singh.

be expensive. The availability and cost of funds need to be balanced.

When looking at the financing of a PPP, bankability is at the heart of the matter. Bankability is the chicken in the chicken curry in India, and the pork in pork fried rice in the People's Republic of China (PRC). Unless a project is bankable, there is no way anyone will finance it.

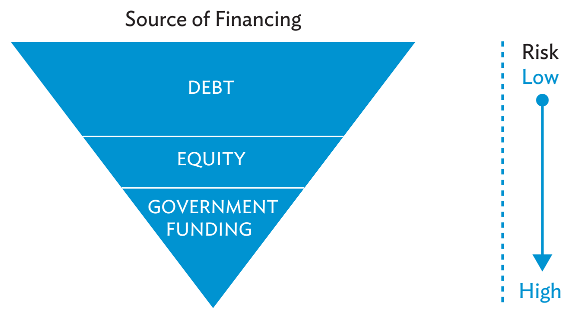
What is required to make a project bankable? It requires that the risk and responsibilities of all elements of a PPP have been properly identified, properly understood, and properly allocated. It requires clarity on which risks the government will take, and which will be taken by the private sector. It requires clarity on who is in charge of construction, operations, financing, toll collection, and others.

The risk allocation needs to be backed up by strong institutional machinery for enforcing agreements. This means that regulation is needed. Unless the contract and concession agreement in which that risk have been allocated is enforced, a project is likely to fail. The lenders—bankers, pension funds, insurance funds—and the equity investors, whoever is putting money into a project, will have to be satisfied that these matters have been taken care of and the project is properly structured. When that happens, a project can be called bankable.

The basic rule for a PPP is if the private sector can control a variable, they should carry the associated risk. There is no point in trying to be clever with the private sector about this. And there is no point in the private sector being clever with the public owner. If there is a risk the private sector can manage, they should accept it.

Such risk management can raise interesting challenges. There was a road bridge outside the capital New Delhi. It crossed a river with a rich history of religious stories. One of the foreign investors asked who could take the archaeological risk. The concern is what would happen if construction started and a statue of Lord Krishna, a famous Indian god, was found and people changed their minds and wanted to build a temple instead of a bridge. The public sector partner was advised that archaeological risk needed to be covered. They laughed. The Indian insurance companies were not interested. Finally, coverage was provided by one of the world's biggest insurance providers. However, it required a hefty premium.

Financing Public–Private Partnership: A Question of Risk Allocation



Source: Pradeep Singh.

Debt Financing Problems and Solutions

	Problem	Solution
Quality of funds	• Not enough funds available from banks • Prudential limits – Ceilings on bank lending to single sector/ group/company	• New sources like pension funds, insurance funds • Infrastructure debt funds • Bond markets
Quality of funds	• High up-front capital costs but revenues spread over long time and back ended. • Banks are required to provide long-term debt. • Banks only have short-term deposits. This creates asset liability mismatch for banks.	Pension funds/Insurance funds • Can provide long-term debt based on long-term and assured revenue stream from pension/premium contributions without asset liability mismatch • Pension funds/insurance funds require only long- term steady returns. It is provided by stable infrastructure projects. Can complement banks.

Debt Financing Actions

Action point # 1:

Development of a bond market to provide liquidity

Action point # 2:

Creation of infrastructure debt funds to share financing risks

Action point # 3:

Provision of rating for bond market and debt funds to assess risk

What is credit enhancement?

Any structure that reduces the project risks and improves the creditworthiness of the project.

Why is credit enhancement necessary?

To give comfort to domestic and international institutions and to meet regulatory requirements.

How do you provide credit enhancements?

1. Sovereign guarantee by the Government of India necessary to support projects BUT not sufficient as India is rated BBB-.
2. Need to partner with multilateral agencies like ADB to enhance the credit rating to internationally accepted AAA paper.

Source: Pradeep Singh.

Having prepared a bankable project, what should happen next?

There are three main sources of financing for PPPs: debt, equity, and the government. Money has different risk, mainly because the ability and desire to take risk is different among different people.

A PPP is not just about private sector funding. The government by its nature is best placed to take the highest level of risk. In India, it is typical for governments fund the initial stage—such as project conception, structuring, design, preparation of concession agreements and contracts, and surveys of readiness to pay. Millions of dollars and 1–2 years are required. The government has to pay such costs.

Governments that try to escape these costs are likely to end up paying much more later on. The project may not succeed, or if it succeeds it will eventually fail or the private sector will exploit the weaknesses in preparation. Governments also provide viability gap funding. PPPs are often not commercially viable based solely on their own revenues. It is difficult for a road, metro, or water project to recover the entire cost of investment and operations and maintenance based on user fees because of a need to make sure that these important services are also affordable to those that cannot pay the full cost. For instance, people that live near a new toll road but are not users will benefit indirectly from the road, but will not pay the toll.

Viability gap funding is that extra funding that a government must provide to make a project commercially viable and bankable. A project that needs viability gap funding is not necessarily a bad project. When governments provide viability gap funding, they are just standing in proxy of beneficiaries.

How should such viability gap funding be provided? The answer is via competition. For example, a private operator of a tollway can be allowed to charge say Rs10 for 10 kilometers for 25 years. Before issuing the PPP, the government should ask how much the operator wants as viability gap funding to build the road. Whoever submits the lowest request for viability gap funding is the winning bidder.

In India, viability gap funding for roads was provided by a special tax on fuel. The money is ring-fenced and available for national highway authorities. Providing such funding is an important part of the role of government.

Equity provided by shareholders takes the next level of risk. Then there is debt. The smallest amount of funding should be from the government, with the next highest from equity, and the biggest amount from debt. Debt providers take the least risk. Equity will get its return only when debt requirements are fully met.

India, however, is now facing a shortage of new debt financing for PPPs. In India, a very large number of banks are government or public sector banks. There are also private banks. Most financing for PPPs were from governments banks. However, the balance sheets of the government banks are no longer able to meet the requirements of the infrastructure sector. On top of the fact that the banks do not make enough money, they cannot lend unlimited amounts of money to the same sector because of prudential and regulatory limits. India now needs to look for other sources like pension funds, insurance funds, and so on to bring in more money.

One solution is to create an infrastructure debt fund that will secure finance from insurance funds and other sources. That will finance different projects, spreading the risk. To be most effective, liquid bond markets are needed.

India is also facing a challenge with the quality of funds. One issue is the asset–liability mismatch for banks. PPPs require long-term financing, but banks have short-term deposits and should predominately lend for the short term. If not, depositors may be unable to get their money back on demand. On the other hand, pension and insurance funds have long-term funds that suit PPPs. However, only banks have established the ability to evaluate infrastructure projects and undertake a due diligence of projects.

A solution is to bring the funding sources together. Banks can provide the initial investment when project risk is highest. Then 2 or 3 years after the project has stabilized and revenue is clear, the pension and insurance funds can take on the investment. This is the assembly line of financing we want to create in India.

Bonds have an important role to play. A bond can be used like a loaf of bread that is sliced and then sold in slices. Bonds can be issued by infrastructure debt funds or other intermediaries and used to finance a number of projects. Bonds need to be rated through rating agencies. It is the rating agencies that do all the hard assessing if a bond is AAA or BBB, etc., so that the these insurance and pension funds can comfortably buy these bonds.

Indian bonds are not rated very high as people do not have enough trust that their money will be repaid. The rating of India's sovereign bonds is BBB-, and this is too low for insurance and pension funds. Credit enhancement is necessary. This is when where an independent party accepts some risk of a bond so as to raise the rating. For example, a guarantor may commit to pay out a loan that the borrower cannot. Local intermediaries as well as multilateral organizations like ADB or the World Bank provide such guarantees.

Pension fund and insurance companies wanted to invest, but in India they have only invested 1%–3% of those money in infrastructure. Being creative while ensuring stable policies has the potential to mobilize these funds and utilize the amazing investment opportunities available in India's infrastructure.

Financing the Private Partner in the People's Republic of China

From the presentation of Cynthia Wang, Managing Director, Investment Banking of the China International Capital Corporation

At present, the private sector contribution to infrastructure in the PRC is largely financed by short-term bank loans. The market is dominated by conservative investors and investor groups that lack diversity.

The Company Law and Securities Law allow bonds to be issued for infrastructure, but only when there is good track record over the prior 3 years. Infrastructure-based financing for new assets cannot meet this requirement. A viable alternative is to finance the private partner on a corporate finance basis, that is, through bank loans to enterprises with a good commercial record and adequate asset backing.

For PPPs such as the Beijing Metro and CGH, the cost for securing bank loans is low, and the project can carry a high level of liabilities. It is cost effective to provide corporate finance to such good companies that then inject the capital into their infrastructure investments. Because corporate financing is so attractive, the PRC banks are not interested in other ways of supporting infrastructure.

Insurance companies and pension funds are another alternative that have large asset holdings. However, their presence is still small. The policies and credit evaluation systems of insurance companies and other long-term investors make it difficult for them to invest in infrastructure. In addition, uncertainty about government subsidies and user charges, and hence, the returns from infrastructure projects, has, to date, made it hard to attract such investors.

What kind of innovation and what financing channels can be used instead of bank loans under the regulatory framework of the PRC? The international practice offers some insights.

Securitization is one option. Previous efforts at asset securitization have divided assets into high-risk and low-risk, and then allowed investors to decide on the risk-return profile that suits them. The starting point for such securitization is usually the special purpose of an established project. This, however, does not solve the problem of financing new projects.

We have discussed with the regulators at what stage securitization can be implemented for build–operate–transfer projects. We believe it can take place very early. For example, a road project has clear and stable cash flows very soon after approval. This is because construction risk is low and any subsidies are well defined. Even before charging is yet to start, and even though there is no previous record of the performance, the government approval for the project can allow asset securitization. There are many such projects.

Private equity funds and insurance companies are beginning to enter PPP infrastructure projects through asset securitization. One reason is a perception that the high demand arising from urbanization will generate good rates of return.

One matter requiring attention is the exit mechanisms available to investors. For example, when the agreement to provide on-grid electricity expires, will the company be able to maintain the project? This is a hard question to answer under the current policy and regulatory framework. The cost of taking over projects is high because secondary markets are shallow.

While project financing is small in the PRC, there are more and more overseas projects with PRC participation that do use project financing. This provides an inspiration that banks of the PRC can learn from.

Can the trading of innovative products be supported? Can there be innovation in listing and exit mechanisms? Financial innovation is not that hard to achieve. There are many success stories from the PRC. However, efforts to innovate need to be coordinated across sectors and interest groups. Perhaps what is needed is for the People's Bank of China to offer guidance on the reform of bank supervision policies, and undertake a coordinating role.

The Potential for Public–Private Partnership Funds in the People's Republic of China

From the presentation of Leo Zhang, Managing Director, Jumbo Consulting

The commercial banks of the PRC have large asset bases and provide substantial financial support for infrastructure. But the modes of investment are relatively narrow. Most infrastructures of local governments are refinanced by bank loans backed by government guarantees. When private partners are involved in infrastructure, they are mainly financed via bank loans.

Relying on the creditworthiness of local governments is an easy option for banks. It provides fast, reliable financing for local governments. But it puts pressure on government finances. The rising level of local government debt is now spurring calls for new mechanisms. The international experience is that infrastructure funds provide an important mechanism for diversifying infrastructure financing.

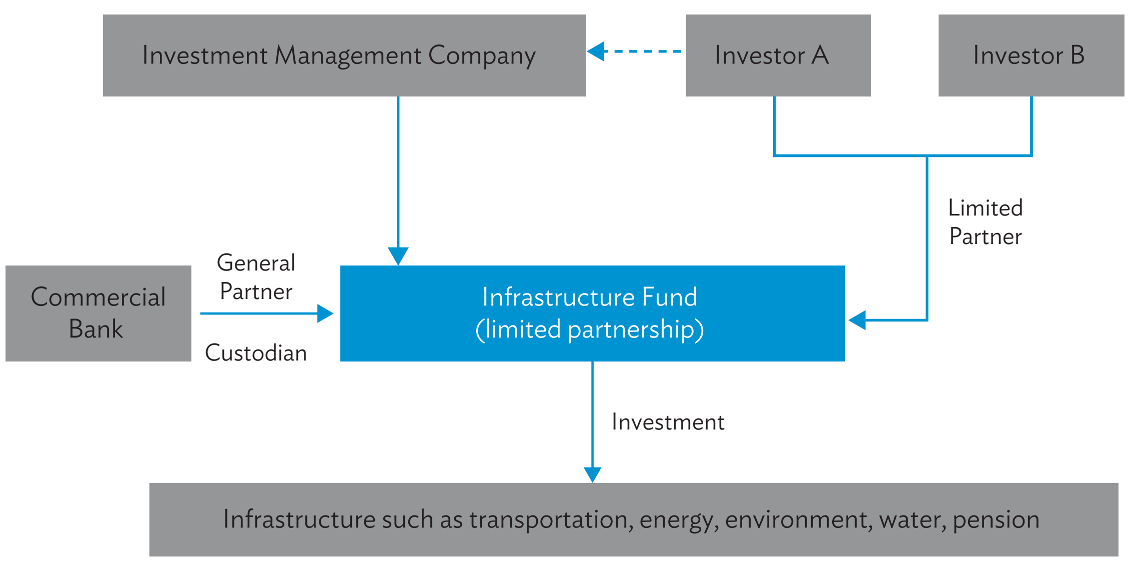
Infrastructure funds are a special form of the private equity fund that can mobilize the substantial supply of social capital in the PRC. Infrastructure funds offer long-term investors a stable, low-risk return that can withstand inflation.

Establishing such a fund starts from the determination of the fund name, type, size, duration, minimum subscription, and structure. It needs to be based on clear investment guidelines that address the following:

- Sector focus, such as energy, transport, municipal environmental protection, or social infrastructure with a clear pricing mechanism;
- Link to underlying market trends, such as the ageing population or urbanization;
- Control requirements. These address how much of an asset should be held by the fund, e.g., at least 50%;
- Rate of return requirements;
- The required protection against inflation and any local government credit problems; and
- Specification of the target maturity of a project. Funds normally emphasize assets under operation because they typically provide more stable returns, but can also allow some investment in assets under construction or renovation.

An exit strategy is also essential. The three main options are (i) sale of the project assets, (ii) transfer of assets to a new fund established by the manager, or (iii) establishment of an exchange-traded fund that allows new investors to buy-out older investors.

Infrastructure Fund that Promotes Diverse Infrastructure Financing



Source: Leo Zhang.

The huge demand for urban infrastructure in the PRC creates opportunities for innovating in financing. Infrastructure funds can promote the diversification of financing and improve the quality of financing. This will help ease financial pressures on local governments and support the rapid urban development of the PRC.

Negotiating a Public–Private Partnership Agreement

From the presentation of Hallam Chow, Partner, Energy, infrastructure Project and Asset Finance of White & Case LLP

The PRC governments are faced with limited financial resources to sponsor public services. Many are looking to improve existing infrastructure and invest in new public infrastructure projects. The PPP offers an alternative model that shares risks with the private sector, but ensure that governments remain in control via the PPP agreement. The advantages include the generation of government revenue from concessions or the leasing of state-owned assets, and improved provision of public services.

The starting point for structuring a PPP is the identification of the risks to be transferred from the public sector partner to the private sector partner. A PPP must also demonstrate that it is generating value for money to the government, i.e., a net benefit in terms of cost, price, quality, quantity, risk transfer, or a combination thereof.

The negotiation dynamics are driven by

- the public partner considering whether the premium it will pay for transferring risk provides value for money;
- the private partner ensuring an appropriate return for carrying risk; and
- lenders preference for the private partner to avoid assuming so much risk that the ability to service debt may be threatened.

The risks normally transferred to the private sector partner relate to site conditions, environment and heritage, design, construction, technology, operations, utilities and other third-party suppliers, government approvals, insurance, inflation, and currency and interest rate changes.

Key issues of concern to the private sector partner during negotiation include (i) caps on revenue or penalties for poor performance; (ii) the need to limit liabilities under indemnities to a level that can be covered by insurance; and (iii) whether the public sector partner is retaining or sharing in certain site condition risks, the risk of a change in law, or force majeure risks classified as "relief events."

The private sector partner will seek to ensure pass through of costs, and avoiding any early termination or reduction in the operating period. This is necessary to allow full recovery of costs and to achieve the target return on equity.

Policy Certainty and Clean Energy

From the presentation of Dai Cunfeng, General Manager, China Clean Energy Investment Company

One of the key issues faced in financing clean energy PPPs is policy certainty. Two examples illustrate the situation.

The government recently put forward an ambitious target of installing 10 solar photovoltaic power generation programs before 2015. As of the end of 2012, there were only seven programs in place in the PRC. To complete 10 new projects is a major challenge. The state had developed a range of supporting policies, such as a photovoltaic electricity subsidy policy, to achieve the target. But some posed a huge problem for a developer of a long-lived asset For example, when a developer signs a contract with power grid company, it used to be renewed annually. Recent reform policy of the State Council released in 2013, have fixed this by allowing, the electricity price to be set for 25 years. This is the sort of improvement that was needed to establish policy certainty.

Heating supply has been opened up to the private sector. Subsidies constitute a major part of the revenue for heating supply companies. For most cities, there have been good prospects for a continuation of subsidies. Such optimism is, however, based on government budgets remaining healthy enough to afford the subsidy. This is no longer assured and policy may need to address the provision of certainty on future subsidies.

Support from the International Financial Institutions

ADB Support for Public–Private Partnerships

From the presentation of Ying Qian, Director, EARD, ADB; and Craig Sugden, Principal PPP Specialist, EARD, ADB

Public–private partnership (PPP) is not a new concept to Asia. It is, however receiving increased attention given its fit with the government efforts to expand public services and the role of the private sector in their delivery.

One driver of this interest is the shortage of capital in Asia. The Asian Development Bank (ADB) is committed to helping meet the huge financing needs by mobilizing the capital and other operational advantages offered by the private sector. ADB started by publishing a number of strategies and manuals for PPPs to provide guidance to its PPP work, and has also upgraded the services it provides to PPPs.[10]

Source: ADB staff.

ADB cooperation with the PRC on PPPs has lasted more than 20 years. ADB has participated in the development of many projects, and established many relationships. ADB hopes to use its cross-sector experience to help new and existing partners engage in the development of projects. ADB will introduce international experiences to help develop suitable PPP projects for the PRC. ADB is also committed to introducing the experience gained in the PRC to other countries so as to achieve knowledge sharing.

The support of ADB for PPPs in the PRC is provided across the four pillars of ADB PPP Operational Plan. The East Asia Regional Department (EARD) is solely responsible for pillars (i), (ii), and (iii); and works with the Private Sector Operations Division, (which has financed around $2 billion in infrastructure PPPs in the PRC) to provide financing support for public and private sector partners to a PPP under the fourth pillar.

ADB aims to help develop and demonstrate best practice approaches to PPPs in the PRC that expand public services and assist innovation in government financing.

The value-added of ADB is derived from a deep understanding of key sectors and the challenges arising from urbanization, and experience and knowledge of PPPs. ADB contributed to many of the reforms to the enabling environment for infrastructure (e.g., tariff and regulatory reform) that make PPPs "bankable." Extensive experience in the finance sector and the public finances of the PRC provides a platform on which this knowledge can be used to develop innovations in PPP financing.

ADB support draws on an engagement in some of the leading PPP programs in developing Asia. The combination of technical assistance and financial support allows a "learning by doing" approach that meets the expectations of local governments for an early, concrete action. The availability of a range of loans

[10] ADB. 2012. *PPP Operational Plan 2012–2020*. Manila. Available in English and Chinese at http://www.adb.org/documents/public-private-partnership-operational-plan-2012-2020-zh ADB. 2008. *PPP Handbook*. Manila (September). http://www.adb.org/documents/public-private-partnership-ppp-handbook-zh

Loan Products

1. **Investment loan** with a performance-based contract.
2. **Loans to financial intermediaries** for onlending, at the financial intermediary's risk, to final borrowers.
3. **Policy-based lending**, to support reforms and improve policies. It provides budget support to governments to address development financing needs.
4. **Results-based lending**, to support governments in designing and implementing government-owned sector programs. Disbursement is linked directly with the achievement of program results
5. **Partial credit guarantee** to cover credit risks associated with a borrower's inability to fulfill its debt service and repayment obligations on time.
6. **A range of other products** are available for private investors e.g., loans, equity investments

Source: ADB staff.

ADB's PPP Operational Plan

Pillar 1 Advocacy and capacity development	Pillar 2 Fostering the enabling environment	Pillar 3 Project development	Pillar 4 Project financing
Create awareness, encourage leadership, identify the potential of PPPs, develop capacity	Help develop the policy, legal, regulatory, and institutional framework	Provide expert support, tool kits, funding costs of transaction advisors, or procurement support	Provide tailored financial support e.g., guarantees, equity, loans, viability gap funding
EARD	EARD	EARD	PSOD and EARD

EARD = East Asia Department, PSOD = Private Sector Operations Department.

Source: ADB. 2012. *PPP Operational Plan, 2012–2020*. Manila. Available in English and Chinese at http://www.adb.org/documents/public-private-partnership-operational-plan-2012-2020-zh

and other financial products from EARD and PSOD allows this support to be tailored to project needs so as to leverage the maximum amount of private investment.

Within the PRC, ADB is focusing on the development of pathfinder PPP projects that would be accompanied by a package of support for capacity development, the strengthening of the enabling environment, and financial innovation. A "PPP demonstration cities" concept is being explored. Rather than disburse support across a wide number of cities, efforts would concentrate on representative cities. These cities would explore progressively more complex PPPs to be implemented building on earlier support from ADB. Surrounding cities will then observe and learn from the demonstration cities and the best practice approaches they pilot.

The demonstration cities concept requires a long-term engagement. Actions would be sequenced so as to provide early results and the adoption of increasingly sophisticated approaches as participating governments and the private sector build their capacity. The projects will be focused on meeting the demands arising from urbanization, including for social (e.g., education, health, and social housing) and other municipal services. This will involve drawing on the international experience to tailor the PPP model used in the PRC to these new sectors.

Additional technical assistance is also available for transaction advisory services. This will help complete well prepared, pathfinder PPPs. This technical support is to ensure that the PPP contracts are "investment grade," and hence, that the PPP projects are bankable. Following international practice, the preference of ADB is to recover non-ADB costs from winning bidders.

World Bank Support for Public–Private Partnerships

From the presentation of Binyam Reja, Lead Transport Specialist and Country Sector Coordinator for Transport, The World Bank

The World Bank provides support to client countries on developing programs and projects for PPP through a number of different tools and mechanisms. This support to governments helps develop the enabling environment for PPPs and sector reform, through technical assistance and as part of broader sector support facilities or facilities specific to PPPs. The World Bank also supports a number of knowledge management tools and collaborates on initiatives to support governments, including

- private sector participation in infrastructure project database,
- Public–Private Infrastructure Advisory Facility, and
- training programs on PPPs.

The World Bank, like other international financial institutions (IFIs), provides financing to governments seeking to support specific projects or PPP programs through viability gap funding or financial intermediary loans. The World Bank also provides partial risk guarantees and credit guarantees to projects in client countries.

The World Bank can bring international knowledge and experience to bear in the development of an effective and sustainable PPP program in the PRC. Developing PPP programs often requires a long project cycle, including the development of policy and regulatory framework, appropriate project selection and transaction development, arranging for project financing and providing viability gap funding when needed for qualified PPP projects, and ex post regulation and contract enforcement. Loans and grants provided by the World Bank can be used to finance transaction and financial advisors to develop PPP programs and specific transactions, and to provide funding support for PPP transactions when needed.

Support for Public–Private Partnerships from the Cities Development Initiative for Asia

From the presentation of Adolfo Guerrero, Head of the PRC Office of the Cities Development Initiative for Asia

The Cities Development Initiative for Asia (CDIA) is a regional initiative established in 2007 by ADB and the Government of Germany, with additional core funding support from the governments of Austria, Spain, and Sweden and the Shanghai Municipal Government. CDIA provides assistance to medium-sized Asian cities to bridge the gap between their development plans and the implementation of their infrastructure investments.

CDIA uses a demand-driven approach with cities. It supports through a demonstration of innovative approaches and mechanisms in the preparation of their medium-term infrastructure investment plans and pre-feasibility studies for high priority infrastructure investment projects. Institutional capacity strengthening is also provided. In this way, CDIA help cities move from strategic master plans to concrete policies and infrastructure projects that are ready to be presented to financiers and project developers.

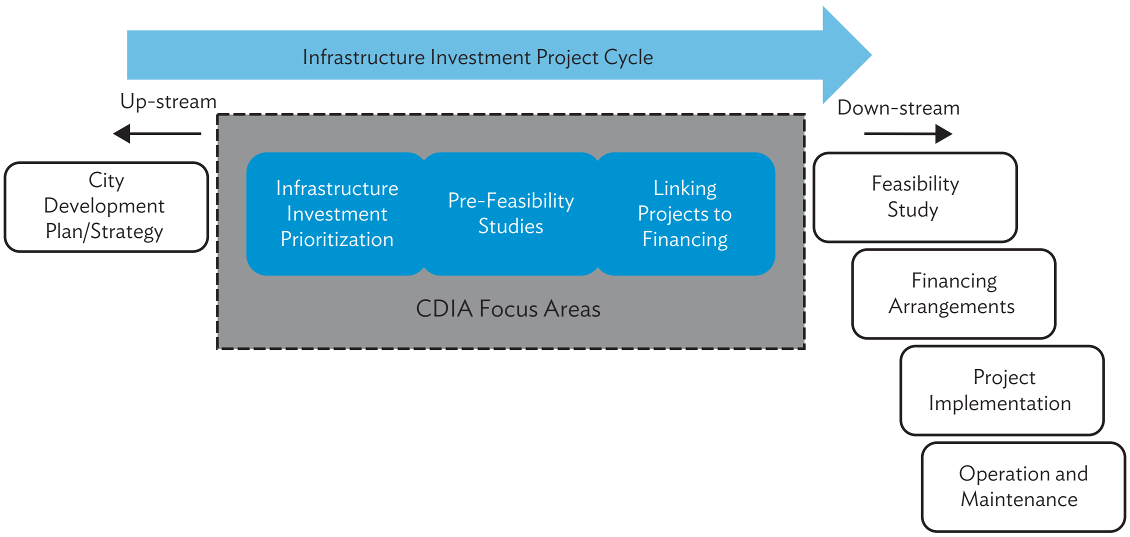
In its first 5 years, CDIA has approved support applications for 50 cities in 14 countries including 78 pre-feasibility studies (PFS). Of these, 44 PFS and 2 urban infrastructure investment programs have been completed in 29 cities. Potential sources of investment financing have been firmed up for 22 PFS in 15 cities. The estimated infrastructure investment value of projects under preparation is about $5 billion, of which CDIA inputs represents approximately 0.25%.

Additional financial resource and expertise are very much needed in the PRC to meet the rising demand for public infrastructure and services arising from rapid urbanization. In this regard, PPPs are considered an alternative way of helping local governments to meet these challenges of implementing development goals without harming their fiscal capacity.

The strategy and business plan for 2013–2017 of the CDIA proposes to increase attention to PPPs for investment in urban infrastructures. CDIA is working with ADB to further develop pathfinder PPPs by providing transaction advisory services that will lead to well-prepared projects with a high certainty of achieving financial closure.

CDIA's PFS help projects in the early stage preparation to evaluate the suitability of involving the private sector. This ensures that the main challenges of feasibility, accountability, risk allocation, and financial sustainability are addressed early in the process and during the preparation.

Cities Development Initiative in Asia: Focus Areas of Intervention in Project Implementation



Source: Cities Development Initiative for Asia.

Public–Private Partnership Implementation Status in Asia, Cities Development Initiative for Asia

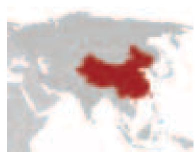
City/Urban Intervention (PFS)	Investment value in $ Million	Linked to Finance	Pipeline
Gejiu, People's Repulic of China			
Primary Land Development	751.6		X
Banda Aceh, Indonesia			
River-based urban infrastructure development, CBD rehabilitation	22.6	X	X
Surabaya, Indonesia			
Urban transport	Ongoing support		X
Surakarta, Indonesia			
Urban transport (Tram system)	49.0		X
Yogyakarta, Indonesia			
Urban transport	62.8		X
Faisalabad, Pakistan			
Industrial Wastewater	141.9		X
Urban Transport	583.1		X
Islamabad, Pakistan			
Urban Transport (BRT System)	79.0		X
Iloilo, Philippines			
CBD revitalization	9.2	X	
Ferry Terminal System	29.8	X	

Source: Cities Development Initiative for Asia.

Cities Development Initiative for Asia: Public–Private Partnership Experiences in the People's Republic of China

Geju, Yunnan – Finalized

Focus areas	Primary Land Development
CDIA support	$350,000 for PFS and Capacity Building
Estimated investment value	$750 million
Potential source of financing	PPP

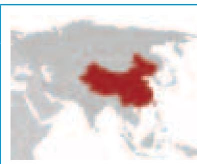
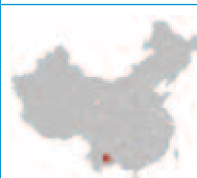



Major accomplishments:

- Robust and feasible business proposal.
- Reconfigured the rules of engagement with the private sector.
- Draft expression of interest and prerequisites for private sector participants to join bidding.
- Draft contract and contract conditions for the engagement with private sector.
- Initiation of discussion with private sector parties.

Yongzhou, Hunan – On going

Focus areas	Solid Waste treatment
CDIA support	$250,000 for PFS and Capacity Building
Estimated investment value	$120 million
Potential source of financing	PPP or other sources

Major accomplishments:

- Robust and feasible business proposal to attract private sector according to the business opportunity and balanced risk allocation.
- Specific public–private partnership (PPP) structure with rules of engagement.
- Prerequisites for private sector partners.
- Key points for inclusion in the draft PPP contract.

Source: Cities Development Initiative for Asia.

Next Steps for Public–Private Partnerships

The Public–Private Partnership Agenda

From the presentation of Ying Qian, Director, ADB; and Craig Sugden, Principal PPP Specialist, EARD, ADB

Of the key issues facing the public–private partnership (PPP) program of the People's Republic of China (PRC), four stand out. These are the potential to

(i) facilitate the PPP program;
(ii) enhance competitive pressures;
(iii) use PPPs in new ways, notably by extending the PPP model into new areas of the economy; and
(iv) explore innovation in PPP financing.

The PRCs framework for PPPs has two key differences to that in place elsewhere—the absence of a national PPP law, and a central PPP unit or coordinator.

A PPP has different requirements to a conventional public investment project, and most countries with active PPP programs have a PPP law that clarifies how these additional requirements are managed. This helps streamline project preparation and implementation and establishes minimum standards of project quality. Supporting material would also be desirable, such as sample contracts, standard definitions and clauses for PPP agreements, a PPP manual or toolkit, and guidance on PPP procedures.

Source: ADB staff.

The PRC has adopted an incremental approach to development of the legal and regulatory environment for PPPs. A broad range of PPP regulatory instruments have progressively been put in place, and many best practice approaches to PPPs are in use. However, the PPP regulations are sector- or location-specific, and there are other best practice approaches to adopt. A national PPP law, as opposed to a lower order regulatory instrument, is still absent.

A PPP coordinator facilitates a PPP program. For example, a coordinator could guide policy dialogue and help sector agencies structure, tender, negotiate, and implement projects. Many decisions makers and officials involved in PPPs are new to PPPs, with little if any prior experience. A PPP coordinator would help compensate for the gaps in experience and knowledge and allow government agencies to implement high-quality PPPs with more confidence.

It is possible to build on what is already in place, such as the PPP regulations adopted by Beijing in 2006. The PPP Research Committee also provides a starting point for a PPP coordinator.

Such actions to improve the enabling environment will be most effective if joined to capacity development programs. In particular, the release of PRC-specific training material and the establishment of PPP resource and learning centers could provide important underpinnings of a strengthened PPP program.

Competitive tendering is a feature of the international PPP model. Issuing a PPP on a competitive basis helps drive down the cost of a PPP and ensure that it provides value for money. The PRC has also adopted competitive tendering as best practice and it is the default procurement method for PPPs set by the procurement and bidding laws.

While competitive tendering is the default, direct negotiation is widely used. The available data suggest that directly negotiated account for around 40% of PPPs by number and more than half of the total investment in PPPs. Direct negotiation is weaker from an accountability and transparency perspective and may result in higher-cost PPPs.

Competitive pressures on the country's PPPs are also eroded by the widespread practice of establishing service providers that are jointly owned by the public and private partners. Shared ownership creates a conflict of interest because the public partner is in part the private partner. The conflict is most intense if the public partner also regulates the PPP. Shared ownership also places additional demands on the management skill of the public partner, which must oversee both the PPP agreement and participate in the management of the service provider.

If a robust PPP program is to be built, it is important to understand why many local governments prefer noncompetitive approaches to PPPs. There can be good reasons for using noncompetitive approaches. But it is also important to understand any unwanted drivers of behavior so they can be corrected.

The workshop has emphasized that government policy supports the extension of PPPs into new areas of the economy. The huge volume of demand for public services arising from rapid urbanization and the tightening budget constraints facing local governments reinforce the need to extend the use of PPPs beyond infrastructure.

Priorities include education, health, social housing, and services that offer high environmental benefits such as public transport and waste management. The international experience demonstrates that such PPPs can be effective and provide value for money in these sectors.

There are important differences between the established infrastructure PPPs and those needed in new areas. One key difference is that the later are more likely to need availability payments. Such payments make up for the absence, or shortfall, in user revenue and ensure that PPPs are commercially viable.

Availability payments create long-term financial commitments that need to be kept to affordable levels. So while PPPs can help ease financing constraints, they do not avoid them altogether. Local governments that buy public services via PPPs need to ensure they have the fiscal capacity to pay for the services. Efforts to expand the PPP program of the PRC into new areas of the economy would thus be complemented by reforms that align financial resources with expenditure responsibilities and improve the fiscal position of local governments.

PPPs in the PRC are reliant on bank financing. While this may suit the current situation, it is at odds with the long-term needs of PPPs. The international experience is that the participation of institutional and other long-term sources of finance helps ensure a PPP program to be robust. Regulatory reforms of 2012 and 2013 have created a window of opportunity to bring institutional investors into PPPs. Capitalizing on this opportunity is perhaps one of the key challenges now facing the PPP program of the PRC.

PPP funds are used internationally to help broaden the financing sources available to a PPP. The nature of these funds depends on whether they support the public or private partner.

For example, India has established a Viability Gap Fund Scheme. This provides the government financial support needed by PPPs that lack sufficient user revenue to be commercially viable on a stand–alone basis.

Most countries with active PPP programs have PPP funds that support private investors. In well-developed PPP markets, the funds are normally established and run by the private sector. But it is accepted that in developing PPP markets, governments may need to play an important facilitating role for such funds. By taking on an intermediary role, PPP funds lower the transaction costs faced by institutional investors and other financiers.

There are many international examples of funds for private investors that can provide valuable lessons for the PRC. These examples include the India Infrastructure Finance Capital Limited and the Indonesia Infrastructure Finance, both of which were established with the assistance of ADB. Such innovations may also suit the needs of the PRC.

Harbin's Perspective

From the presentation of Sun Yongbin, Deputy Director General, Harbin Finance Bureau

Harbin's infrastructure program reflects the development needs of its people. To support this program, we have studied our fiscal expenditure and sought suggestions from ADB, the World Bank, and local enterprises.

Much of the development of Harbin's infrastructure drew on simple approaches. We faced difficulties in securing finance and were not clear on the full range of channels available to us to raise money.

Our imperative to improve management has seen us choose the PPP model. We have been using PPPs for some years, and our understanding of how to use PPPs and plan for them has matured. This has helped us make adjustments to our financing so it is easier to use and more diverse. We are now using PPPs in new areas to solve social problems and to improve people's living standards.

Nevertheless, we need to find more ways to mobilize more social resources and improve the quality of public services.

We are expecting more institutions, including ADB and the World Bank, to help us develop even better ways of financing. Simplified procedures are needed for PPPs so these can be used. It will be important that the Private Sector Operations Department of ADB be more involved in local infrastructure construction. Private enterprises and commercial lenders also have a role to play in helping expand financing channels.

We recognize that supporting actions are also needed from Harbin. Notably, we expect our land policy and other policies to play their role in supporting PPPs.

Luoyang's Perspective

From the presentation of Xiong Wenbo, Deputy Director General of the Luoyang Finance Bureau

Urban infrastructure construction is a long-term task. Urbanization is requiring more and more infrastructure of higher quality. It is generating a large need for financing. Most governments began to develop their infrastructure using simple models. Infrastructure development was funded from revenue as budgets allowed. But the demands on governments rose, and the activities that had to be done grew. Even more funds were needed, and new ways of raising funds were used. These have included the issuance of bonds, bank loans, equity financing, and so on. PPP projects were also developed, although they were not called PPPs as people were not aware of what a PPP was. Governments have already been partnering with the private sector and the market for some time.

ADB is promoting the use of PPP projects to help diversify financing, improve the efficiency of project management, and ease the financial burdens on governments. These aims are supported.

In advancing PPP projects, the key issues to be faced are the following:

- Lack of systematic law and legal provisions. This needs to be addressed.
- The limited product and opportunities available for the private sector.
- The need to improve the accountability of operators and their capacity, which is at various stages of development.

Further issues are faced in working with the IFIs. Luoyang has a long history of working with the IFIs and is among the first of several cities to use World Bank loans. The World Bank and ADB procedures may not match well with those of the government. Governments are fast but the World Bank and ADB are not. It is important to address this and achieve better coordination.

Urbanization and Public–Private Partnerships

From the presentation of Dr. Sun Jie, Secretary General of the PPP Research Committee and the Institute of Fiscal Sciences

There is a clear consensus that people are the priority in managing urbanization. There are two main paths to urbanization—to either encourage farmers to the cities or to urbanize rural areas. Regardless of which path is chosen, a large amount of infrastructure is needed. If the construction of such infrastructure is solely dependent on governments and their resources, the process of urbanization will take a long time.

To solve the issues related to urbanization, there is a need to use financial leverage and to attract social capital and make implementation as fast and as good as possible. It is clear that PPPs are a potential solution and can make an important contribution to the urbanization of the PRC.

An International Perspective

From the presentation of Pradeep Singh, Vice-Chairman and CEO, Infrastructure Development Finance Company, India

To create win–win situations, the strengths and weakness of the public and private sectors must be identified. By using the best of the private and public sectors, better quality outcomes will be achieved at lower cost. The reason for engaging the private sector is that they can offer greater efficiency and better technology, since they are driven by results and need to generate profit. Accessing these incentives will give the public a better outcome.

Cities must start with small and incremental steps; with small projects, and with various types of PPP arrangements. A PPP project may engage the private sector in different ways. Cities can start with service or management contracts, and later advance to lease and concession contracts and other forms of PPPs.

For example, if the water supply is of poor quality, if the system has many leaks, pollution, and low water pressure, then the public sector can start by bringing in the private sector into operations and maintenance. As the quality of water improves, it is possible to gradually move to a management contract. This will provide the rewards of confidence, trust, and capacity. Once the system is fixed, the system can then be leased to the private sector, with the public sector to receive rental income that can be used to expand the system. Concession agreements with the private sector can then be considered as a final step.

Above all, this evolution in the role of the private sector must take place in an environment of trust and partnership. This is perhaps the most important insight we can draw from the international experience.

Concluding Comments

Zhang Minwen, Director,
International Department, MOF

I would like to offer several comments on the meeting on behalf of the International Department of the Ministry of Finance and Deputy Director General Yang. As discussed by DDG Yang in his opening remarks, we encourage the promotion of PPPs in a steady and active manner. We would like to add the importance of a pragmatic attitude and approach.

I have six additional comments to offer:

(i) Firstly, I will address some international perspectives on public–private partnerships (PPPs). Noting that a standard international definition of PPPs is yet to emerge, we favor a broad definition of PPPs for the PRC. PPPs are seen to encompass any cooperation that mobilizes private capital for the infrastructure and public services required for economic development.

Some have ranked the PRC as an emerging country for PPPs. Others suggest that the PRC has the basic policy environment and judging from practice and the large number of PPPs already implemented, the PRC does have a well established enabling environment for PPPs. With this large pool of PPPs in place, our view is that the next step for PPPs is the support of projects with strong demonstration effects and innovative features, either in terms of finance, sector, or geographical location. Extending efforts to local levels (e.g., prefecture and county levels) is especially important. The Asian Development Bank (ADB) and other international financial institutions (IFIs) are encouraged to support such demonstration PPPs.

(ii) Some experts have proposed that PPP legislation and a policy framework should be prepared. Not all countries have prepared such legislation PPPs. For instance, the United Kingdom (UK), which is quite advanced in PPPs and was among one of the first countries to implement PPPs, has not established a PPP law. In the UK, regulations on PPPs are included within sector policy frameworks. Dr. Sun Jie mentioned that 54 laws and regulations are already in the PRC, including articles on PPPs. Perhaps the government can work with the IFIs to study the need for a PPP law and policy framework to add to the 54 laws and regulations in the PRC.

We need to ensure that PRC regulations and policies are practical so as to ensure a smooth implementation of PPPs. Some agencies that are active PPP players may need to consider releasing some framework regulations based on related PPP polices.

(iii) Perhaps we can think about whether ADB can choose some cities and conduct municipal-level assessments of the readiness for PPPs. Based on these assessments we could have a better understanding of the basic conditions and enabling environment for PPPs, potential challenges, and gaps. The assessment would also help PPP project owners promote and improve their policies and mechanisms to strengthen the enabling environment for future PPPs.

(iv) As for fiscal risks, the main factors include pre-warning, monitoring, and supervision. As DDG Yang raised in his opening remarks, the PRC and the international community has attached great importance to the control of fiscal risks involved in channeling private capital into the real economy and promoting PPPs. PPPs can simply change the time profile of the government's financial support for a project rather than altogether avoid the need for such support. Public expenditure currently paid immediately may instead be repaid in smaller amounts over a period of 10, 20, or 30 years. PPPs thus can be similar to raising government debt. Given the likelihood of an expansion in the use of PPPs in the PRC, it will be important for fiscal agencies to understand and recognize potential risks and to ensure that prevention and control mechanisms are in place.

(v) Turning to capacity building, we cannot overemphasize its importance.

This leads me to the three areas where support is encouraged. Firstly, we hope ADB can provide some policy advisory technical assistance and conduct some research on a PPP road map or action plan that can help improve the policy framework and regulatory mechanisms. Secondly, we hope that ADB can initiate training programs in cooperation with the bilateral programs. Some bilateral assistance organizations have shown great interest and provided follow-on support for PPP trainings. For example, organizations from Australia and the UK have already provided some training programs, which can be further expanded. Thirdly, we would like to encourage the exchange of experience.

The presentations of ADB and the World Bank have shared quite a lot of successful cases and substantial best practice experiences, which could be shared among different cultures and countries. Such exchange of experience is an important part of the capacity building for government agencies.

(vi) The PRC would like ADB and the World Bank to help its enterprises engage in PPP projects in other Asian countries, taking advantage of the good experience of PRC enterprises in basic and urban infrastructure project development and management. Through such trilateral cooperation, the PRC will also be able to contribute its share in PPP development in Asia.

Finally, I would like to thank everyone. This one-and-a-half day's meeting agenda is very tight, and we have not had enough time to digest it all. But the experts were very attentive to the discussion and exchange of views. Thank you all!

Feng Baoshan, Director, Department of Foreign Capital and Overseas Investment, National Development and Reform Commission

The one-and-a-half day workshop had been very fruitful. I would like to add some comments.

What I hope everyone can appreciate is that there are three main approaches to utilizing foreign funds.

The first approach is the foreign loan from the World Bank and ADB, which is familiar to everyone. The second approach is foreign domestic investment, such as through equity financing or joint ventures between domestic and foreign enterprises. The third approach is international commerce. This third approach has been under strict control in recent years given the high demand for the foreign currency reserve. For PPPs, foreign direct investment can be employed for some projects. International commerce is an alternative for utilizing foreign funds in PPPs, which is familiar to the Foreign Fund Division of the local Development and Reform Commissions.

We have heard a lot about PPPs. I suggest we implement reforms step by step as the central government has planned. We have implemented a lot of PPPs since the early 1990s. With a deepening of reform, PPPs will gain more momentum. The key point is how to bring private funds into the provision of public services in a proper way.

Last year, we released policies to encourage private investment in public services. But we still have a long way to go to ensure effective and sustainable provision of public services. Some of the key issues have been highlighted in the workshop.

One is that it is important to establish an open, equal, and just competition procedure under a proper legal framework. The legal framework needs to ensure that private sector partners can engage in infrastructure construction and operation on an equal footing.

The lack of legal protection makes both sides afraid of default. How do they solve the problem? They establish a new joint venture. A good legal environment is quite important as it ensures smooth infrastructure construction.

Private enterprises are also very important. The point just put forward by Pradeep Singh from India is very good—we need a stronger private sector, as well as a stronger government, in order to improve quality and to achieve better results. May I suggest that the government should walk ahead, so as to make the private sector more actively engaged.

We encourage and support the private sector enterprises to get involved in infrastructure. This is clear from the material released by the State Council last year. When it comes down to the management, we have to streamline approval procedures and decentralize management step by step. To deliver the results more effectively and more easily, we will take different measures and approaches to enable the private sector to play a bigger role more effectively, more easily, and in a simpler way. But that may involve a large range of matters and industries, and it will take time to figure out the best way to promote private sector participation.

Thank you!

Appendix 1
Workshop Agenda

Thursday 22 August 2013, Morning Session		
09:00–09:30	**Session 1: Welcome and Introductory Remarks**	
	Moderator: Mr Dan Yang, Deputy Country Director, People's Republic of China Resident Mission (PRCM), Asian Development Bank (ADB)	
	Mr Ayumi Konishi, Director General, East Asia Department of the Asian Development Bank (ADB) Mr Yingmin Yang, Deputy Director General, Ministry of Finance (MOF)	
9:30–10:45	**Session 2: Public-Private Partnerships (PPP) and Urbanization in the People's Republic of China (PRC)**	
	Moderator: Mr Ayumi Konishi, Director General, East Asia Department of the Asian Development Bank (ADB)	
	Outline of PPPs in [the People's Republic of] China	Dr Sun Jie, Secretary General, PPP Research Committee and Institute of Fiscal Sciences
	The Potential Role and Challenges of PPPs in Urbanization in [the People's Republic of] China	Mr. Cai Jianming, Professor, Beijing Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences Doug Webster, Chair/Professor, Global Studies Program, Arizona State University
	Tianjin Wuqing Land Development and Social Housing Project	Mr Wang Wenlin, Department Director of Sinohydro Group Ltd
	Open discussion	
11:00–12:30	**Session 3: Case Studies of ADB-supported Projects**	
	Moderator: Mr Andrew McCusker, recently retired director of operations for the Hong Kong, China Mass Transit Railways Corporation	
	China Gas Natural Gas Distribution	Mr Eric Leung, Deputy Managing Director and Chief Financial Officer, China Gas Holdings Limited Mr Hallam Chow, Partner, Energy, Infrastructure, Project and Asset Finance of White & Case LLP Ms Hisaka Kimura, Principal Investment Specialist, PSOD, ADB
	Education PPPs	Mr Norman LaRocque, Senior Education Specialist of the Southeast Asia Regional Department
	Open discussion	

Thursday 22 August 2013 Afternoon Session		
14:00–15:30	**Session 4: Case Studies of New Approaches to PPPs**	
	Moderator: Mr. Cai Jianming, Professor, Beijing Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences	
	Non-Infrastructure PPPs	Mr Simon Booker, Director, Infrastructure Finance of the international consultant firm KPMG
	Beijing Metro Line 4	Mr Yi Min, Chief Executive Officer, China MTR Corporation Ltd
	International Approaches to Subway PPPs	Mr Andrew McCusker, recently retired director of operations for the Hong Kong Mass Transit Railways Corporation
	Open discussion	

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16:00–17:30	**Session 5: Innovation in PPP Financing**	
	Moderator: Mr Ying Qian, Director, EARD, ADB	
	India's Experience in PPP Financing	Mr Pradeep Singh, Vice- Chairman and CEO, Infrastructure Development Finance Company, India
	A Practitioners Perspective on PPP Financing in the PRC	Mr Dai Cunfeng, General Manager of the China Clean Energy Investment Co.
	The Potential Role of PPP Funds in the PRC	Mr Leo Zhang, Managing Director , Jumbo Consulting
	The Suitability of Financing Innovation to the PRC	Ms. Cynthia Wang, Managing Director, Investment Banking of the China International Capital Corporation
	Open discussion	

	Friday 23 August 2013 Morning Session	
09:00–10:30	**Session 6: Support for PPPs from the International Finance Institutions**	
	Moderator: Mr Pradeep Singh, Vice-Chair and CEO, Infrastructure Finance Development Corporation, India	
	ADB Support for PPPs	Mr Ying Qian, Director, EARD, ADB Mr Craig Sugden, Principal PPP Specialist, EARD, ADB
	ADB for a Model Social Housing PPP	Mr Zheng Kangbin, Senior Financial Specialist, PSOD, ADB
	Support from ADB's Private Sector Operations Department	Ms Hisaka Kimura, Principal Investment Specialist, PSOD, ADB
	World Bank Support for PPPs	Mr Binyam Reja,Lead Transport Specialist and Country Sector Coordinator for Transport, World Bank
	Support for PPPs from the Cities Development Initiative for Asia	Mr Adolfo Guerrero, Head of the PRC Office of the Cities Development Initiative for Asia
	Open discussion	
11:00–12:15	**Session 7: ADB Suggestions on Next Steps for PPPs in the PRC**	
	Moderator:Dr. Bai Xiaoqing,China Investment Corporation.	
	The PPP Agenda	Mr Ying Qian, Director, EARD, ADB Mr Craig Sugden, Principal PPP Specialist, EARD, ADB
	A Municipal Government Perspective	Mr Sun Yongbin, Deputy Director General, Harbin Finance Bureau
	A Municipal Government Perspective	Mr Xiong Wenbo, Deputy Director General of the Luoyang Finance Bureau
	Learning from the PRC's Experience	Dr Sun Jie, Secretary General of the PPP Research Committee and the Institute of Fiscal Sciences
	An International Perspective on ADB's Role in the PRC	Mr Pradeep Singh, Vice- Chairman and CEO, Infrastructure Development Finance Company, India
	Open discussion	
12:15–12:30	**Session 8: Concluding Observations and Suggestions**	
	Closing remarks will be provided by representatives of MOF, NDRC, and ADB	

Appendix 2
Profile of Presenters

Simon Booker

Director, Infrastructure Finance of the international consultant firm KPMG

Simon Booker specializes in Infrastructure and Project Finance/PPPs. Prior to joining KPMG, Booker worked for both PwC in the Global Infrastructure Team based in London and the UK Civil Aviation Authority as senior financial advisor. Booker focuses on transport projects and PPPs in roads, rail, energy, ports, and airports space. He has advised on some large PPPs and acquisitions, including a wide range of road, airport, rail, and port transactions. Booker has also led several health care and hospital PPP projects. He has also advised clients in the region on their investment strategies, including Changi Airports International, Khazanah, and Mitsubishi. He was also involved in the refinancing of the National Air Traffic Services PPP following the events of 9/11 and was also responsible for regulatory price determinations at London's key airports.

Cai Jianming

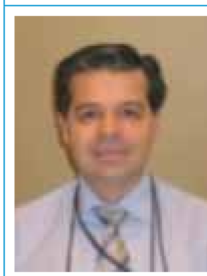
Professor, Beijing Institute of Geographical Sciences and Natural Resources Research (IGSNRR), Chinese Academy of Sciences(CAS), and RUAF China regional coordinator of RUAF Foundation.

Cai Jianming frequently serves as a senior consultant or expert on urbanization, regional development–urban agriculture, and food security issues to international agencies such as the World Bank, Department for International Development (DFID) of the United Kingdom, Ford Foundation, International Development Research Center of Canada (IDRC), GTZ, Lincoln Land Institute, and government ministries of the PRC, such as the National Development and Reform Commission, the Ministry of Housing and Urban-Rural Construction, and the Ministry of Civil Affairs. He also served as consultant for local governments and the private sector.

Hallam Chow

Partner, Energy Infrastructure, Project and Asset Finance of White & Case LLP

Hallam Chow is a partner of White & Case in charge of project financing, structured financing, and asset-based financing in energy and infrastructure sectors. Hallam has over 15 years of experience in advising lenders and equity investors in structuring to address emerging new needs, such as portfolio approach to link a series of projects with international market. His recent projects include advising the Asian Development Bank (ADB) in natural gas extraction and distribution, wind power, water distribution, wastewater treatment, district energy network development, and capacity building for the government officials in Asia.



Adolfo Guerrero

Head, PRC Office of the Cities Development Initiative for Asia

Adolfo Guerrero is senior PPP specialist and head of operations in the PRC for the Core Management Team (CMT) of the Cities Development Initiative for Asia (CDIA). This is a joint program led by the Asian Development Bank, created to assist cities to identify and prepare priority infrastructure projects to find financing. Guerrero focuses on institutional arrangements for PPPs targeting deal structure and project bankability with associated capacity development activities. He has various experiences in evaluating and identifying funding sources for PPP projects from his previous works as a contractor where he was director for international operations, and of engineering companies dealing with public infrastructure investment with the private sector, where he worked as general manager.

Hisaka Kimura

Principal Investment Specialist, PSOD, ADB

Hisaka Kimura is head of East Asia Unit of Private Sector Infrastructure Finance Division and is responsible for exploring opportunities, and structuring of infrastructure projects. She has over 18 years of experience in managing multi-stakeholder projects in various countries, including the PRC, the United Kingdom, and the Russian Federation, as well as in Central and Eastern Europe. Her areas of expertise include clean energy, urban environmental infrastructure, natural resources, emergency relief and reconstruction. Prior to joining the Asian Development Bank, she worked for the European Bank for Reconstructions and Development and Ernst & Young in London.

Ayumi Konishi

Director General, East Asia Department, ADB

Ayumi Konishi is the director general of the East Asia Department of the Asian Development Bank (ADB). He assumed office in June 2013. Konishi is responsible for ADB operations in the People's Republic of China and Mongolia, and ADB relations with Hong Kong, China; the Republic of Korea; and Taipei,China. Konishi joined ADB in 1988. He served in various capacities, including his last three positions as the deputy director general for ADB's Pacific Department (2012–2013), senior advisor to the Strategy Policy Department (2011–2012), and ADB Country Director for Viet Nam (2006–2011). Konishi is a career international civil servant with 30 years of experience.

Norman LaRocque

Senior Education Specialist, Southeast Asia Department, ADB

Norman LaRocque's work involves designing and implementing projects in ADB developing member countries and carrying out research on education issues. His current projects include preparation of a proposed $300 million secondary education program in the Philippines and administration of a $190 million higher education loan to Viet Nam. His research focuses on the regulation of education, higher education financing, public–private partnerships, student finance, and private education.

Eric Leung

Deputy Managing Director and Chief Financial Officer, China Gas Holdings Limited

Eric Leung is a deputy managing director and chief financial officer of China Gas Holdings Ltd and served as its joint managing director of since 28 January 2011. He is responsible for the financial, financing, international business development, and investor relations activities of China Gas Holdings. He joined China Gas Holdings in early 2005 after a 13-year career in investment banking, during which he helped numerous companies in the PRC; Hong Kong, China; Macau, China; and Taipei,China raise debt and equity capital, especially for energy and infrastructure projects. He is a lawyer by training, and is qualified to practice law in Hong Kong, China; the United Kingdom, including Wales; and Australia.

Andrew McCusker

Recently retired director of operations, Hong Kong Mass Transit Railways Corporation

Andrew McCusker has more than 40 years of industry experiences in defense, water, gas, power, and railway. Over the last 24 years, he has worked at MTR Corporation Hong Kong,[China], which is recognized as one of the world's leading railway companies, and for the last 5 years has been the operations director. At MTR Corporation, he held a number of key positions including as executive director of MTR Hong Kong, chairman of NP360 Cable Car, chairman of Telecoms provider TraxComm HK, and a board member of Octopus Ltd HK. He remains a board member of the Metro Trains Melbourne.

Ying Qian

Director, East Asia Department, ADB

Ying Qian is director of the Public Management, Financial Sector and Regional Cooperation Division of the East Asia Department, Asian Development Bank. Ying and his colleagues in Mongolia and in the People's Republic of China, initiate and implement programs and projects in areas of access to finance; green and innovative financial services; regional financial market integration and financial stability; fiscal reforms; social security; governance; and private sector development. They also work, at subregional level in Central Asia and Southeast and Northeast Asia, on regional cooperation, trade facilitation, and trade and investment programs and projects.

Binyam Reja

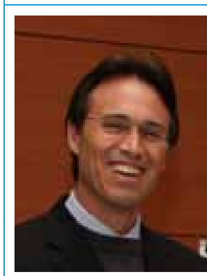
Lead transport specialist and country sector coordinator for transport, World Bank

Binyam Reja is responsible for coordinating the World Bank's transport lending program for the People's Republic of China, covering highways, railways, and urban transport projects, and for leading policy dialogue with client governments in central, provincial, and local governments. Prior to moving to Beijing in August 2012, Reja was the senior transport economist and acting sector manager for the South Asia Region at the World Bank based in Washington, DC where he was responsible for managing several transport and urban transport sector projects and promoting high-level policy dialogue with client governments in the South Asia region. He has worked extensively on transport financing reform, public–private partnership projects, and public transport sector regulatory and institutional reforms.

Pradeep Singh

Vice-chairman and CEO, Infrastructure Development Finance Company, India

Pradeep Singh has over 34 years of work experience in government and nongovernment organizations, private sector, and academia. He has been working in the infrastructure sector for the past 15 years. Previously, he served as the CEO of IL&FS Infrastructure Development Corporation (IIDC). He oversaw the development of infrastructure projects in public–private partnership formats in collaboration with state and central governments in various sectors including roads, ports, airports, water supply and sewage systems, e-governance, industrial parks, and tourism.



Craig Sugden

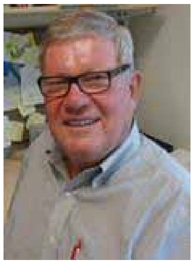
Principal PPP Specialist, East Asia Department, ADB

Craig Sugden is an economist with more than 25 years experience in Australia and Asia and the Pacific. He has contributed to the preparation or management of PPPs for tollways, electricity distribution, sea and airports, and metro and rail lines. He is also experienced in the management of privatized and corporatized public services, regulatory reform, and the strengthening of government planning, budget and revenue systems. Sugden has provided economic advice for the resolution of a wide range of commercial disputes and was appointed as an expert economic witness to the Australian Federal Court.

Cynthia Wang

Managing Director, Investment Banking of the China International Capital Corporation

Cynthia Wang has over 16 years of capital markets experience in the People's Republic of China; Hong Kong, China; Macau, China; Taipei,China; and the United States. She has led over 50 equity and bonds underwriting deals, most recently the 2013 IPO of Sinopec Engineering Group in Hong Kong, China; the 2013 Sinopec USD bond; the 2013 Standard Chartered Bank (China) Financial Bond; and the 2013 Huaneng Dim Sum bond. She is also leading a number of cross-border M&A deals, infrastructure project finance deals, and advising several Fortune 500 clients on their planned Shanghai Listings. Prior to CICC, she was the head of Power and Shipping coverage team at Standard Chartered China, and a senior banker in the Debt Capital Market team at BOCI. At JP Morgan Chase, she worked on the proprietary trading desk for the International Fixed Income department in New York City.

	Douglas Webster *Professor of East Asian Urbanization at Arizona State University* Douglas Webster holds a PhD in city planning from the University of California, Berkeley. He has held academic positions worldwide, including at Stanford University, Utrecht University, the University of British Columbia, the National University of Singapore, and the Chinese Academy of Science. He was senior advisor to the National Planning Agency of Thailand (NESDB) from 1993–2004. Webster is a frequent advisor to the World Bank, ADB, and the innovative property developer, Shui On Land. He has held research grants for work on Chinese urbanization from the Ford Foundation, the World Bank, the Lincoln Institute for Land Policy, the Chinese Academy of Science, and others. He is author of over 150 publications, primarily on East Asian city building, competitiveness, and sustainability, and is currently co-authoring a book on the People's Republic of China's urban future.
	Leo Zhang *Managing Director, Jumbo Consulting* As cofounder and managing director of Jumbo Consulting with 20 years experience in engineering, corporate banking, infrastructure consulting, Leo Zhang is a pioneer practitioner of infrastructure privatization in the People's Republic of China (PRC). He advised extensively national and local governments, domestic and international private investors in such infrastructure sectors as water, environment, transport, energy and health care. His expertise covers financial, company restructuring, management issues, and regulatory policies. Under his leadership, Jumbo has closed dozens of remarkable transactions in the PRC's infrastructure sector in the past years and was ranked in the list of Top Consulting Firms in the water sector of the PRC for 8 consecutive years (2005–2012).
	Additional Presenters: **Bai Xiaoqing**, China Investment Corporation **Dai Cunfeng**, General Manager of the China Clean Energy Investment Co. **Dan Yang**, Deputy Country Director, PRC Resident Mission, ADB **Zheng Kangbin**, Senior Financial Specialist, PSOD, ADB **Sun Jie**, Secretary General of the PPP Research Committee and the Institute of Fiscal Sciences **Sun Yongbin**, Deputy Director General, Harbin Finance Bureau **Xiong Wenbo**, Deputy Director General of the Luoyang Finance Bureau **Yingmin Yang**, Deputy Director General, Ministry of Finance (MOF) **Yi Min**, Chief Executive Officer, China MTR Corporation Ltd

Appendix 3
List of Participants

Ministry of Finance 财政部		
1	Yang Yingming 杨英明	Deputy Director-General, Ministry of Finance 财政部国际司副司长
2	Mo Xiaolong 莫小龙	Director, Ministry of Finance 财政部国际司技援处处长
3	Zhang Minwen 张敏文	Director, Ministry of Finance 财政部国际司国金二处处长
4	Gong Feng 龚俸	Director, Ministry of Finance 财政部国际司国关二处处长
5	Li Li 李莉	Director, Ministry of Finance 财政部教科文司综合处调研员
6	Liu Yingzhi 刘英志	Deputy Director, Ministry of Finance 财政部国际司技援处副处长
7	Ding Lili 丁丽丽	Deputy Director, Ministry of Finance 财政部农业司农业一处副处长
8	Hou Qixiu 侯起秀	Project Officer, Ministry of Finance 财政部经济建设司综合处主任科员
9	Peng Xiang 彭翔	Project Officer, Ministry of Finance 财政部国际司国关二处主任科员
10	Na Kejun 那可君	Project Officer, Ministry of Finance 财政部国际司国关二处主任科员
11	Zhang Sicong 张思聪	Project Officer, Ministry of Finance 财政部社会保障司干部
12	Rong Yue 戎越	Project Officer, Ministry of Finance 财政部会计司准则一处
13	Hu Yangzi 胡样子	Project Officer, Ministry of Finance 财政部国际司国金二处主任科员
14	Huang Wei 黄伟	Project Officer, Ministry of Finance 财政部国际司国金二处干部
15	Tu Yingyan 涂莹燕	Project Officer, Ministry of Finance 财政部国际司国金二处干部

National Development and Reform Commission 国家发改委		
16	Feng Baoshan 冯宝山	Director, NDRC 国家发改委外资司调研员
17	Liao Sheng 廖胜	Project Officer, NDRC 国家发改委外资司

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		Central Governments and agencies 中央政府和机构
18	Wu Zheru 武哲如	Deputy Director, Ministry of Water Resources 水利部外资办副处长
19	Yang Cancan 杨灿灿	Project Officer, Ministry of Education 教育部国际司主任科员
20	Liu Xiaoshuang 刘晓霜	International Department, National Health and Family Planning Commission 国家卫生和计划生育委员会国际司
21	Zheng Rui 郑锐	Deputy Director, China Railway Corporation 中国铁路总公司外资中心副处长

		Research Institute for Fiscal Science, Ministry of Finance 财政部科研所科研基地
22	Sun Jie 孙洁	Researcher 财科所区域室研究员；中国财政学会PPP研究委员会秘书长
23	Meng Yan 孟艳	Researcher 财科所金融室研究员；中国财政学会PPP研究委员会副秘书长
24	Chen Xinping 陈新平	Researcher 财科所金融室研究员
25	Liu Wei 刘薇	Deputy Researcher 财科所金融室副研究员；中国财政学会PPP研究委员会副秘书长
26	Jing Wanbo 景婉博	Assistant Researcher 财科所外财室助理研究员；中国财政学会PPP研究委员会副秘书长
27	Su Jingchun 苏京春	Doctor 财科所博士
28	Li Xinlong 李新龙	Deputy Director, Jiaozuo Finance Bureau, Henan Province 河南省焦作市财政局办公室副主任
29	Li Xianalin 李享林	Deputy Director-General, Wuhai Finance Bureau, Inner Mongolia 内蒙古乌海市财政局副局长
30	Zeng Wei 曾伟	Head, Hunan Finance Bureau 湖南省财政厅科研所所长
31	Wang Hui 王辉	Officer, Hunan Finance Bureau 湖南省财政厅科研所干部
32	Lin Pingwu 林平武	Director, Foshan Finance Bureau, Guangdong Province 广东省佛山市南海区财政局局长
33	Kong Yuee 孔月娥	Deputy Director, Foshan Finance Bureau, Guangdong Province 广东省佛山市南海区财政局副局长
34	Luo Weiji 罗伟基	Section Chief, Foshan Finance Bureau, Guangdong Province 广东省佛山市南海区财政局科长
35	Fang Cuicui 方翠翠	Project Officer, Foshan Finance Bureau, Guangdong Province 广东省佛山市南海区财政局干部
36	Ma Yongjun 马永军	Deputy Manager, Weifang State-owned Property Management Co., Ltd., Shandong Province 山东省潍坊市国有资产经营投资公司副总经理

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37	Zhang Minge 张明娥	Officer, Weifang State-owned Property Management Co., Ltd., Shandong Province 山东省潍坊市国有资产经营投资公司干部
38	Wang Jianguo 王建国	Researcher, Shanxi Finance Department 山西省财政厅科研所研究员
39	Zhang Xiaosan 张小三	Shanxi Finance Department 山西省财政厅科研所
40	Hu Yi 胡毅	Deputy Director, Taiyuan Finance Bureau, Shanxi Province 山西省太原是财政局副调研员
41	Li Jun 李军	Head, Jincheng Finance Bureau, Shanxi Province 山西省晋城市财政局科研所所长
42	Zhang Chunrong 张春荣	Linfen Finance Bureau, Shanxin Province 山西省临汾市财政局国际科
43	Ren Gaoping 任高平	Officer, Linfen Finance Bureau, Shanxin Province 山西省临汾市财政局干部
44	Yang Xiaodong 杨晓冬	Deputy Director, Shanghai 上海市闵行区办公室副主任
45	Huang Qi 黄麒	Officer, Shanghai 上海市闵行区预算编制审核科干部
46	Jiang Yizhou 江一舟	Chief Accountant, Chanshan Finance Bureau, Zhejiang Province 浙江省常山县财政（地税）局总会计师
47	Hu Gongya 胡龚雅	Deputy Director, Zhejiang Province 浙江省常山县土地开发整理中心副主任
48	Zhang Chaoying 张超英	Director, Society of Public Finance of China, Ministry of Finance 中国财政学会正处级秘书；中国财政学会PPP研究委员会副秘书长
49	Sun Wei 孙维	Officer 财政部科研所干部

Local Governments and Projects Implementing Agencies 地方政府和项目单位		
50	Gong Enwei 宫恩威	Project Officer, Heilongjiang Finance Department 黑龙江省财政厅主任科员
51	Sun Yongbin 孙永斌	Deputy Director General, Harbin Finance Bureau, Heilongjiang Province 哈尔滨市财政局副局长
52	He Mei 何梅	Director, Harbin Finance Bureau, Heilongjiang Province 哈尔滨市财政局处长
53	Zhang Zaiwen 张再文	Director, Harbin Finance Bureau, Heilongjiang Province 哈尔滨市财政局处长
54	Wang Xijun 王希军	Project Officer, Heilongjiang Provincial DRC 黑龙江省发改委外资处主任科员
55	Sun Yongbin 孙永斌	Deputy Director General, Harbin Finance Bureau 哈尔滨市财政局副局长
56	Xiao Xin 肖鑫	Section Chief, Fuxin Finance Bureau, Liaoning Province 辽宁省阜新市财政局科长

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57	Sun Miao 孙淼	Deputy Director, Liaoning Provincial DRC 辽宁省发改委外资处副处长
58	Feng Mei 冯梅	Deputy Director, Xinjiang Provincial DRC 新疆发改委副调研员
59	Cai Xiangping 蔡湘平	Deputy Director, Xinjiang Finance Department 新疆财政厅中亚处副处长
60	Lei Tinghua 雷霆华	Project Officer, Tianjin Provincial DRC 天津市发改委主任科员
61	Li Guibin 李贵宾	Project, Officer, Tianjin Finance Department 天津市财政局外经处干部
62	Peng Yilin 彭怡琳	Assistant to Department Head, Tianjin Infrastructure Investment Co. Ltd. 天津市基础设施建设投资集团有限公司融资发展部部长助理
63	Ji Xinhua 纪鑫华	Project Officer, Shanghai Finance Department 上海市财政局主任科员
64	Wang Jianlong 王建龙	Shanghai DRC 上海市发改委及上海APL项目办
65	Zhu Junyong 朱军勇	Shanghai Changsha Investment Group Co. Ltd. 上海市城市建设投资开发总公司
66	Xu Guodong 徐国栋	Zhejiang Finance Department 浙江省财政厅
67	Jin Jingliang 金婧靓	Deputy Project Officer, Zhejiang Housing and Urban-Rural Development Department 浙江省住房和城乡建设厅副主任科员
68	Xu Wei 徐卫	Deputy Director, Hebei Finance Department 河北省财政厅涉外处副处长
69	Shi Haifeng 史海峰	Deputy Director, Hebei Provincial DRC 河北省发改委外资处副处长
70	Zhang Yongquan 张永全	Deputy Manager, Hebei Investment Co., Ltd. 河北建投旅游投资公司副总经理
71	Yu Zhaoqing 于兆庆	Director, Henan Provincial DRC 河南省发改委调研员
72	Sun Xiaowei 孙晓蔚	Deputy Director, Henan Provincial DRC 河南省发改委副调研员
73	Zhao Min 赵敏	Director, Henan Finance Department 河南省财政厅国际处处长
74	Zhang Qi 张湛	Deputy Project Officer, Henan Finance Department 河南省财政厅国际处副主任科员
75	Guo Hongzhen 郭宏震	Deputy Director, Henan Finance Department 河南省财政厅政策研究室（财科所）副主任
76	Cui Kai 崔凯	Section Chief, Henan Investment Group Co. Ltd. 河南投资集团有限公司部门主任
77	Long Xinchang 龙新昌	President, Henan Investment Co., Ltd. 河南省豫资城乡投资发展有限公司董事、副总经理

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78	Wu Qikun 吴奇锟	Project Manager, Henan Investment Co., Ltd. 河南省豫资城乡投资发展有限公司项目主管
79	Xiong Wenbo 熊文博	Deputy Director-General, Luoyang Finance Bureau, Henan Province 洛阳市财政局副局长
80	Zhen Tiejun 甄铁军	Section Chief, Luoyang Finance Bureau, Henan Province 洛阳市财政局科长
81	Sun Zhen 孙真	Deputy Section Chief, Luoyang Finance Bureau, Henan Province 洛阳市财政局副科长
82	Wang Yibo 王一博	Section Chief, Luoyang Finance Bureau, Henan Province 洛阳市财政局科长
83	Zhang Haitao 张海涛	Project Officer, Shanxi Provincial DRC 山西省发改委外资处主任科员
84	Liu Guichuan 刘贵川	Deputy Director, Shanxi Finance Department 山西省财政厅副处长
85	Guo Chuang 郭创	Deputy Director, Shanxi Housing and Urban-Rural Development Department 山西省住房和城乡建设厅副处长
86	Ma Li 马莉	Deputy Director, Ningxia Provincial DRC 宁夏发改委副处长
87	Yang Yancong 杨彦聪	Project Officer, Ningxia Finance Department 宁夏财政厅外经处主任科员
88	Yang Zhigang 杨志刚	Deputy Director-General, Yinchuan Finance Bureau, Ningxia Province 宁夏银川市财政局副局长
89	Xie Rong 谢荣	Section Chief, Yinchuan Finance Bureau, Ningxia Province 宁夏银川市财政局科长
90	Mai Guizhen 麦桂珍	Financial Manager, Yinchuan Investment Co., Ltd. 银川市城市建设投资控股有限公司财务总监
91	Li Tao 李韬	Deputy Director-General, Shizuishan Finance Bureau, Ningxia Province 石嘴山财政局副局长
92	Ma Shun 马顺	Section Chief, Shizuishan Finance Bureau, Ningxia Province 石嘴山财政局科长
93	Wan Ximei 万喜梅	Deputy Director, Hubei Finance Department 湖北省财政厅国际处副处长
94	He Xiaolu 何小璐	Deputy Director, Hubei Provincial DRC 湖北省发改委副处长
95	Jia Tingyou 嘉庭友	Deputy Director, Xiangyang City DRC, Hubei Province 襄阳市发改委副主任
96	Mao Nan 毛南	Deputy Director, Hunan Finance Department 湖南省财政厅副处长
97	Li Bin 李宾	Deputy Director, Hunan Provincial DRC 湖南省发改委外经处副处长
98	Xie Yong 谢勇	Head, Changsha Investment Group Co. Ltd., Hunan Province 长沙市城市建设投资开发集团有限公司投资发展部长

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99	Zhou Tao 周涛	Director, Chongqing Provincial DRC 重庆市发改委外资处调研员
100	Li Ying 李颖	Deputy Director, Chongqing Finance Bureau 重庆市财政局副处长
101	Chen Xi 陈熙	Project Officer, Chongqing Finance Bureau 重庆市财政局项目主管
102	Zhang Hua 张华	Director, Sichuan Finance Department 四川省财政厅世行办主任
103	Fu Xi 付曦	Project Officer, Sichuan Provincial DRC 四川省发改委副主任科员
104	Ding Xiaoming 丁小明	Deputy Manager, Sichuan Investment Co., Ltd. 四川发展控股有限责任公司资金运营中心副总经理
105	Luo Yi 罗毅	Head, Sichuan Investment Co., Ltd. 四川发展控股有限责任公司新型城镇化投资公司筹备工作小组组长
106	Zhu Jing 朱璟	Deputy Director, Jiangxi Finance Department 江西省财政厅副处长
107	Deng Qiang 邓强	Director, Jiangxi Provincial DRC 江西省发改委处长
108	Wu Hao 吴昊	Deputy Project Officer, Jiangxi Provincial DRC 江西省发改委副主任科员
109	Li Wei 李卫	Manager, Jiangxi Investment Group Co. Ltd. 江西省城镇建设投资有限公司工程部经理
110	Zou Guoping 邹国平	President, Xinyu Investment Group Co. Ltd., Jiangxi Province 新余市高铁新区建设投资有限公司董事长
111	Yan Bo 晏波	Vice Minister, Xinyu Investment Group Co. Ltd., Jiangxi Province 新余市高铁新区建设投资有限公司融资部副部长
112	Shu Dongqin 舒栋琴	Project Officer, Guizhou Finance Department 贵州省财政厅外经处主任科员
113	Chen Tingting 陈婷婷	Director, Guizhou Provincial DRC 贵州省发改委外资处处长
114	Zhang Chao 张超	Project Officer, Guizhou Provincial DRC 贵州省发改委外资处主任科员
115	Meng Jianjian 孟健健	Deputy Director, Guiyang ADB PMO on Water Resources Management, Guizhou Province 亚行贷款贵阳市水资源综合管理项目办副主任
116	Li Lin 李琳	Deputy Manager, Guiyang Investment Co., Ltd., Guizhou Province 贵阳全阳建设投资集团有限公司投融资部副部长
117	Xie Yuchou 谢煜筹	Director, Guangdong Finance Department 广东省财政厅国际债务办调研员
118	Li Fanding 李凡丁	Director, Guangdong Provincial DRC 广东省发改委调研员
119	Bao Hongwu 包宏武	Deputy Director, Fujian Provincial DRC 福建省发改委外经处副处长

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120	Ye Guoliang 叶国良	Director, Fujian Finance Department 福建省财政厅外债处处长
121	Lin Hongzhen 林鸿珍	Manager, Fujian Investment Group Co. Ltd. 福建投资开发集团有限责任公司资金财务部门总经理
122	Xie Wensi 谢文思	Project Officer, Guangxi Finance Department 广西壮族自治区财政厅国际金融合作处科员

Asian Development Bank亚洲开发银行		
123	Ayumi Konishi 小西步	Director General, East Asia Department, ADB 亚行东亚局局长
124	Yang Dan 杨丹	Deputy Country Director, ADB PRC Resident Mission 亚行驻中国代表处副首席代表
125	Qian Ying 钱鹰	Director, EAPF 亚行东亚局公共管理、金融及区域合作处处长
126	Craig Sugden	Principal Public-Private Partnership Specialist, EAPF 亚行东亚局公共管理、金融及区域合作处首席PPP专家
127	Hisaka Kimura 木村寿香	Head, Private Sector Infrastructure Finance 亚行私营部门东亚基础设施融资部主任
128	Norman LaRocque	Senior Education Specialist of the Southeast Asia Department 亚行东南亚局高级教育专家
129	Zhen Kangbin 郑康彬	Head, Private Sector Group 亚行私营部门业务部主任

Other Organizations 其他组织		
130	Bai Xiaoqing 白晓晴	China Investment Corporation 中国（香港）投资公司副总经理
131	Adolfo Guerrero	Head of the PRC Office of the Cities Development Initiative for Asia 亚行亚洲城市发展中心（CDIA）中国区办公室主任
132	Andrew McCusker	recently retired director of operations for the Hong Kong, China Mass Transit Railways Corporation 前港铁公司运营总监
133	Binyam Reja	Lead Transport Specialist and Country Sector Coordinator for Transport, World Bank 世行首席交通专家及国家项目协调员
134	Cai Jianming 蔡建明	Professor, Beijing Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences 中国科学院北京地理科学与资源研究所教授
135	Cynthia Wang	Managing Director, Investment Banking of the China International Capital Corporation 中国国际金融有限公司投资银行业务部总经理
136	Dai Cunfeng 代存峰	General Manager, China Clean Energy Investment Company 中清能（北京）投资有限公司总经理
137	Eric Leung 梁永昌	Deputy Managing Director 中国燃气首席财务官

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138	Leo Zhang 张燎	Managing Director, Jumbo Consulting 济邦咨询董事总经理
139	Pradeep Singh	Vice-Chairman and CEO, Infrastructure Development Finance Company 印度基础设施金融发展公司副总裁兼首席执行官
140	Simon Booker	Director, Infrastructure Finance of the international consultant firm KPMG KPMG基础设施融资部门主管
141	Sun Yongbin 孙永斌	Deputy Director General, Harbin Finance Bureau 哈尔滨市财政局副局长
142	Wang Wenlin 王文林	Department Director of Sinohydro Group Ltd 中国水利水电集团二局国际工程部副主任
143	Yi Min 易珉	Chief Executive Officer, China MTR Corporation Ltd 港铁中国CEO

Public–Private Partnerships in Urbanization in the People's Republic of China

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About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to approximately two-thirds of the world's poor: 1.6 billion people who live on less than $2 a day, with 733 million struggling on less than $1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

ADB

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