



Technical Assistance Report

Project Number: 50019-001
Policy and Advisory Technical Assistance (PATA)
August 2016

People's Republic of China: Mobilizing Pension Fund Financing for Public–Private Partnerships

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 8 August 2016)

Currency unit	–	yuan (CNY)
CNY1.00	=	\$0.1503
\$1.00	=	CNY 6.6535

ABBREVIATIONS

ADB	–	Asian Development Bank
DMF	–	design and monitoring framework
NSSF	–	National Social Security Fund
PPP	–	public–private partnership
PRC	–	People's Republic of China
TA	–	technical assistance

NOTE

In this report, "\$" refers to US dollars.

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POLICY AND ADVISORY TECHNICAL ASSISTANCE AT A GLANCE

POLICY AND ADVISORY TECHNICAL ASSISTANCE AT A GLANCE				Project Number: 50019-001	
1. Basic Data					
Project Name	Mobilizing Pension Fund Financing for Public–Private Partnerships	Department /Division	EARD/EAPF		
Country	China, People's Republic of	Executing Agency	Sichuan Finance Department		
2. Sector	Subsector(s)	ADB Financing (\$ million)			
✓ Public sector management	Public administration			0.40	
				Total	0.40
3. Strategic Agenda	Subcomponents	Climate Change Information			
Inclusive economic growth (IEG)	Pillar 1: Economic opportunities, including jobs, created and expanded	Climate Change impact on the Project			Low
4. Drivers of Change	Components	Gender Equity and Mainstreaming			
Governance and capacity development (GCD)	Public financial governance	No gender elements (NGE)			✓
Private sector development (PSD)	Conducive policy and institutional environment				
5. Poverty Targeting		Location Impact			
Project directly targets poverty	No	Rural		Medium	
		Urban		Medium	
6. TA Category:	B				
7. Safeguard Categorization Not Applicable					
8. Financing					
Modality and Sources			Amount (\$ million)		
ADB			0.40		
Policy and advisory technical assistance: Technical Assistance Special Fund			0.40		
Cofinancing			0.00		
None			0.00		
Counterpart			0.00		
None			0.00		
Total			0.40		
9. Effective Development Cooperation					
Use of country procurement systems		No			
Use of country public financial management systems		No			

I. INTRODUCTION

1. The Government of the People's Republic of China (PRC) requested policy and advisory technical assistance (TA) from the Asian Development Bank (ADB) for Mobilizing Pension Fund Financing for Public–Private Partnerships (PPPs). Following a mission in April 2016, ADB and the government reached an understanding on the objectives, scope, implementation arrangement, costs, and terms of reference for the TA. The design and monitoring framework is in Appendix 1.¹

II. ISSUES

2. The savings held within the PRC pension funds need to expand to prepare for an aging population; the proportion of people above the age of 60 was around 12% in 2010 but is expected to reach 34% by 2050.² Prudent but growth-oriented investment of these savings will be required if they are to provide the elderly with adequate financial resources during their retirement.

3. The PRC's pension funds have predominantly been invested in treasury bonds and bank deposits. While such assets offer the benefits of low risks, the associated relatively low returns constrain the potential payout from pension funds. Investment in a wider portfolio of assets can help pension funds balance their portfolios and potentially generate higher returns over time. But any portfolio diversification also needs to be prudently managed so as to protect the interests of pension recipients while achieving a high standard of governance.

4. The PRC's expanding PPP program is emerging as an important investment opportunity for the pension funds. PPP activity had largely ceased by 2012, but reforms initiated in 2013 have since seen a large expansion in activity. As of June 2016, the PRC was preparing or implementing 9,285 PPPs across 19 industries, worth around \$1.6 trillion in investment.³ These projects are extending the PRC's PPP model into new areas of the economy, and introducing new approaches to PPPs.

5. The international trend is to prepare a PPP program so it attracts financing from institutional investors, including pension funds. The institutional investors have a long-term investment profile and can offer finance at a fixed and potentially lower cost than conventional bank financing. Accessing their financing normally requires extra effort in structuring PPPs so they provide secure investments. It can, for example, require a repackaging of risk and/or reward investment opportunities. Measures that better manage risks, such as partial credit guarantees, may be required, and projects may initially have to be financed by banks with a view to financing being provided by other investors as they mature.

6. The involvement of institutional investors in PPPs will be facilitated by a transition toward project finance. The PRC's PPPs are mainly financed by bank loans issued in the nature of corporate finance. In line with trends observed in other countries, it is likely that the current emphasis on corporate finance will become less attractive as the PPP program progresses, and that project finance will become more established. The engagement of pension funds can be

¹ The TA first appeared in the business opportunities section of ADB's website on 15 July 2016.

² International Monetary Fund. 2015. People's Republic of China: 2015 Article IV Consultation–Press Release; Staff Report; and Statement by the Executive Director for the People's Republic of China. *IMF Country Report*. No. 15/234. Washington, DC. p.17

³ China Public Private Partnerships Center. Integrated PPP Information Platform (<http://www.cpppc.org:8082/efmisweb/ppp/projectLibrary/toPPPMap.do>)

assisted by the increased use of project bonds, asset securitization, and other forms of project finance.

7. Pension fund reforms in the PRC, and the concurrent expansion of the PPP program, are creating opportunities for pension funds to better engage in PPPs. Numerous government announcements have encouraged pension funds to participate in projects and the PPP funds being established to provide equity and debt financing. Notably, in mid-2015, the State Council allowed pension funds to further diversify their portfolios to improve returns. Pension funds were encouraged to develop methods of financing PPPs, such as loans, equity investments, and project asset-backed investment plans, based on market principles. Up to 30% of assets can now be invested in stocks, investment-linked insurance products, and equity funds. Permitted investments include bonds, asset-backed securities, index futures, bond futures, and major infrastructure projects.

8. Various pension funds support the formal enterprise sector and non-salaried workers in urban and rural areas. The single largest fund is the National Social Security Fund (NSSF), which at the end of 2015 held CNY1.9 trillion in assets to pay for pensions and other forms of social security. NSSF participated in the CNY180 billion PPP fund established by the Ministry of Finance with banks and other institutional investors in September 2015 to provide equity financing. Pension funds are also managed by local governments and there are some funds covering the private sector, such as an enterprise annuity system, and individual voluntary plans.

9. Capitalizing on the opportunities that have emerged for financing by institutional investors, including pension funds, is important to ensuring sustainable financing of the PRC's PPP program. Capitalizing on the opportunities can also make an important contribution to strengthening the financial position of pension funds, so long as the risk of capital erosion for pensioners (current and future) is managed well and good governance standards are preserved. Doing so will require a prudent approach based on balancing the objectives of both the PPP program and the essential requirement that the pension system protect pensioners against risk.

10. The country partnership strategy, 2016–2020 for the PRC positions ADB to continue playing a catalytic role in the PRC's development process through an enhanced operational focus on innovation and value addition, and a further shift toward generating knowledge, sharing best practices, and building capacity.⁴ The country partnership strategy will support the government's efforts to strengthen the policy, legal, fiduciary, and regulatory frameworks and practices to improve the delivery and management of infrastructure and public services.

III. THE POLICY AND ADVISORY TECHNICAL ASSISTANCE

A. Impact and Outcome

11. The project is aligned with the decision of the State Council to develop innovative, market-based financing channels for PPPs. The outcome will be pension fund participation in PPP financing promoted. Performance will be assessed by the submission to the central and local governments, regulators, and major pension funds of the action plan on enhancing the role of pension funds in PPP financing.

⁴ ADB. 2016. *Country Partnership Strategy: Transforming Partnership: People's Republic of China and Asian Development Bank, 2016–2020*. Manila.

B. Methodology and Key Activities

12. The TA will help prepare the PRC's pension funds for financing PPPs, and equip the PRC's PPPs to access pension fund financing. It will have both a national and provincial scope, with Sichuan province providing a case study of provincial conditions and practices. Knowledge products will be prepared to share the findings with national agencies and local governments. The impact and outcome of the TA will be achieved through the following outputs and activities.

13. **Output 1: Pension funds in public–private partnership financing in other countries assessed.** This will draw out the implications for the PRC of practices in other countries based on a desk study and a study tour of countries demonstrating good practices. The output will identify the different ways in which pension funds have engaged in PPPs, the preconditions for successful financing of PPPs by institutional investors such as pension funds, the implications of different pension fund structures and types (e.g., defined benefits versus defined contribution funds), and the impacts on both the PPP programs and the development of the finance sector. Maximum use will be made of earlier studies that examined how to protect the long-term interests of pension funds while facilitating their investment in PPPs. These studies highlighted the importance of ensuring policy and regulatory frameworks for long-term investment, and a transparent investment environment.⁵ The regulatory and governance framework in which pension funds have operated and, in particular, the regulatory controls and other formal checks and balances on the actions of pension fund managers, will also be explored.

14. **Output 2: Suggestions on improving the role of pension funds in public–private partnership financing prepared.** While the national and local government-managed pension funds have recently been provided more flexibility to engage in PPPs, improvements to investment and asset management practices are still needed. The opportunity to increase potential returns needs to be matched with prudent management of their assets and risk profile to ensure financial sustainability and good governance.

15. Drawing on the findings of output 1, reviews will be conducted on the readiness of the NSSF and local government pension funds to diversify their portfolios to include investment in PPPs. This will encompass information management systems and disclosure, the regulatory and governance framework, pension fund management standards, and investment guidelines and strategies (e.g., on risk–return profiles). Asset allocation decisions, performance assessment, and risk management techniques will be examined. The compliance of financing a broader portfolio of assets, including PPPs, with the fiduciary responsibilities of pension funds will be considered. The impact of recent regulatory reforms and any barriers that have become apparent during their implementation will be examined. Challenges specific to financing PPPs, such as those arising from key provisions in PPP agreements (e.g., termination clauses and step-in rights) and the need to understand infrastructure, will be given close attention.

16. Given the large number of local government pension funds across the PRC, it will not be possible to examine all and Sichuan's funds will act as a case study of practices at the local government level.⁶ The output will include preparation of a stocktake of the NSSF and Sichuan's pension funds (covering, for example, their structure, governance arrangements, financial position, and operations).

⁵ Organization for Economic Cooperation and Development. 2011. *Pension Funds Investment in Infrastructure: A Survey*. <http://www.oecd.org/dataoecd/59/33/48634596.pdf>; and Foster Infrastructure. 2012. *Comparative Study of Frameworks to Protect the Long-Term Interests of Pension Funds Investing in Public–Private Partnerships*. <http://www.apec.org.au/docs/Pension%20Fund%20Investment%20in%20PPPs.pdf>.

⁶ As of the end of 2015, Sichuan province's pension funds were valued at CNY259 billion.

17. The output will examine the response by pension funds to recent directions from the State Council on PPP financing, such as to make more use of project bonds and asset-backed securities. Close attention will also be paid to directions given to finance regulatory departments to strengthen regulation, and to guide financial institutions to correctly identify, calculate, and control risks according to the principles of risk under control and commercial sustainability.

18. The output will examine the suitability of PPPs to access pension fund financing, drawing on the findings from output 1 on how other countries have prepared PPPs so they can access institutional investors. Observations will be prepared based on nationwide developments in the PPP operational framework supported by the Ministry of Finance, the National Development and Reform Commission, and other central agencies.

19. To ensure a practical focus, the output will also conduct case studies of individual PPP projects. The output will present at least four case studies from Sichuan's PPPs program. The case studies will look at the financing sources of these PPPs, the participation of institutional investors such as pension funds, and test whether efforts are being made to ensure PPPs are attractive assets for pension funds. These studies will, for example, examine if the PPPs were suited to project financing by providing adequate protection for lenders, for example. Insights from other PRC provinces preparing similar PPPs, and data in the Integrated PPP Information Platform of the China PPP Center, will also be utilized. Drawing on the experience of other countries, each case study will offer suggestions on how to improve the readiness of PPPs for financing from pension funds.

20. **Output 3. Action plan for enhancing the role of pension funds in public-private partnership financing prepared.** The findings of the TA will be encapsulated in an action plan for improving the readiness of pension funds to invest in PPPs, and for improving the readiness of PPPs to access pension fund financing. Close attention will be paid to the views of the regulators and administrators of pension funds in preparing the action plan, and lessons from the experience of other countries.

21. In order to enhance the outreach of the findings, the TA will support awareness-raising and capacity development events. This will include a national-level workshop to develop and present the proposed action plan, which will involve participants from key central government agencies. Maximum use will be made of ADB assistance and other development partners so as to add value to earlier work, and to avoid duplication. Key materials prepared by the TA will be released for wider use via ADB's and other websites.

22. Risks include (i) support for policy and regulatory reforms needed to improve the role of pension funds in PPPs cannot be secured from relevant government agencies or regulators; (ii) restrictions on access to pension funds and project information hinder the conduct of detailed analysis; and (iii) weak capacity in local government agencies or other work commitments hinder their effective participation in the conduct of assessments and other TA activities.

C. Cost and Financing

23. The TA is estimated to cost \$450,000, of which \$400,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-other sources). The government will provide counterpart support in the form of office space, assistance in arranging meetings with counterpart agencies, counterpart staff and other services to the consultants, and other in-kind contributions. Detailed cost estimates are in Appendix 2.

D. Implementation Arrangements

24. The TA will be implemented over 36 months, from 1 October 2016 to 31 September 2019. The Sichuan Finance Department will be the executing agency and provide high level guidance to the TA, while the Public–Private Partnership Research Institute of China in Southwest Jiaotong University will be the implementing agency and lead on operational matters. The consultants' detailed work plan will be updated and agreed by the implementing agency and ADB as the team is mobilized.

25. The TA will be implemented in cooperation with the Ministry of Finance's China PPP Center, and the National Council for Social Security, which is responsible for the NSSF. The implementing agency will coordinate with these and other government agencies and stakeholders. The implementing agency will take overall responsibility for seminars, workshops, the international study tour, and the day-to-day work of the consultants.

26. International advisors (an institutional investment advisor and a PPP advisor) will provide 3 person-months of input. National consultants (an institutional investment advisor and team leader, a PPP specialist, financial specialist, pension fund specialist, and coordinator) will provide 30 person-months of inputs. Considering the nature of the assignment and the availability of the required expertise, the national consultants will be engaged through a firm using the fixed budget selection and biodata technical proposal.⁷ The international consultants will be engaged on an individual basis. As TA implementation will make extensive use of participatory workshops, and a wide range of skills and experience will be required, provision is also made for resource persons. The outline terms of reference is in Appendix 3.⁸

27. The TA will be monitored and evaluated based on the implementation of activities and satisfactory delivery of outputs following the agreed timeline and budget. To support monitoring and evaluation, consultants will submit an inception report, a midterm report, a draft final report, and a final report to the executing agency and ADB. The main mechanism to monitor and assess the TA will be TA review missions. The knowledge products created by the TA will be disseminated by the executing agency and ADB.

IV. THE PRESIDENT'S DECISION

28. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$400,000 on a grant basis to the Government of the People's Republic of China for Mobilizing Pension Fund Financing for Public–Private Partnerships, and hereby reports this action to the Board.

⁷ This recruitment method is justified as a precise definition of the terms of reference for the studies is possible, and changes to the terms of reference are not expected during implementation. The recruitment method is also justified because the budget available for the studies is fixed (\$165,000 for fees and per diem plus expenses of up to \$65,000) and cannot be exceeded, and the time and personnel inputs can be accurately assessed. If no suitable firm can provide the required consultants in a timely manner, the national consultants may be hired individually, subject to the appropriate ADB approval process.

⁸ ADB will engage the international and national consultants, as well as any resource persons, following its Guidelines on the Use of Consultants (2013, as amended from time to time). The proceeds of the TA will be disbursed following the *Technical Assistance Disbursement Handbook* (2010, as amended from time to time). Consultants and resource persons will be engaged on a fixed-price and/or lump-sum basis wherever feasible.

DESIGN AND MONITORING FRAMEWORK

Impact the TA is Aligned with Innovative market-based financing channels for PPPs developed (State Council Notice on the Promotion of PPP in the Delivery of Public Services) ^a			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
Outcome Pension fund participation in PPP financing promoted	Submission to the central and local governments, regulators, and major pension funds of the action plan on enhancing the role of pension funds in PPP financing (by 2020; baseline: NA)	Website data, social media, media announcements (daily) ^b	Support for policy and regulatory reforms needed to improve the role of pension funds in PPPs cannot be secured from relevant government agencies or regulators.
Outputs 1. Pension funds in PPP financing in other countries assessed 2. Suggestions on improving the role of pension funds in PPP financing prepared 3. Action plan for enhancing the role of pension funds in PPP financing prepared	1a. Submission to SFD of an outline of an assessment of practices in other countries and implications for the PRC (by month 9; baseline: NA) 1b. Final assessment of practices in other countries and the implications for the PRC accepted by the SFD (by month 12; baseline: NA) 1c. Study tour report on practices in countries demonstrating good practices in pension fund financing of PPPs finalized (by month 18; baseline: NA) 2a. Stocktaking of the National Social Security Fund and Sichuan's pension funds completed (by month 12; baseline: NA) 2b. Review of the readiness of pension funds to diversify their portfolios, including through investment in PPPs, completed (by month 18; baseline: NA) 2c. Review of the suitability of PPPs to access pension fund financing completed (by month 18; baseline: NA) 2d. Submission to SFD of at least four case study reports of the potential for pension fund financing of PPP projects (by month 24; baseline: NA) 3a. Submission to SFD of an action plan for improving the readiness of pension funds to invest in PPPs and for improving the readiness of PPPs to access pension fund financing (by month 36; baseline: NA) 3b. At least 200 person-days of awareness-raising events completed and at least 75% of participants report an enhanced understanding, inclusive of a national-level	1a–c. Website data, social media, media announcements (daily) ^b 2a–d. Website data, social media, media announcements (daily) ^b 3a. Website data, social media, media announcements (daily) ^b 3b. Participant lists and evaluations	Restrictions on access to the pension fund and project information hinder the conduct of detailed analysis. Weak capacity in local government agencies or other work commitments hinder their effective participation in the conduct of assessments and other TA activities.

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
	workshop on the proposed action plan (by month 36; baseline: NA)		
Key Activities with Milestones 1. Pension funds in PPP financing in other countries assessed 1.1 Consult with SFD and stakeholders on the content of the assessment of practices in other countries and implications for the PRC (by month 6). 1.2 Prepare an outline of the assessment and finalization with SFD (by month 9). 1.3 Prepare and submit to SFD of a draft then final assessment (by month 12). 1.4 Conduct a study tour and prepare a report on good practices in other countries (by month 18). 2. Suggestions on improving the role of pension funds in PPP financing prepared 2.1 Consult with the National Social Security Fund and Sichuan's pension funds on their structure, governance arrangements, financial position, and operations (by month 12). 2.2 Consult with pension funds on their readiness to invest in PPPs (by month 18). 2.3 Review PPPs and their suitability to accept financing from pension funds (by month 18). 2.4 Prepare and consult with SFD on draft case studies of pension funds and PPPs (by month 21). 2.5 Finalize case study reports in consultation with SFD (by month 24). 2.6 Prepare an action plan for improving the readiness of Sichuan's pension funds to invest in PPPs and for improving the readiness of Sichuan's PPPs to access pension fund financing (by month 24). 3. Action plan for enhancing the role of pension funds in PPP financing prepared 3.1 Consult with decision makers, government agencies, and other stakeholders to strengthen the understanding of key issues and seek input to the action plan (throughout the TA). 3.2 Conduct awareness-raising events with decision-makers, government agencies, and other stakeholders to strengthen the understanding of key issues and seek input to the action plan (throughout the TA). 3.3 Prepare and release an action plan (by month 36).			
Inputs Asian Development Bank: \$400,000 Note: The government will provide counterpart support in the form of office space, assistance in arranging meetings with counterpart agencies, counterpart staff and other services to the consultants, and other in-kind contributions.			
Assumptions for Partner Financing Not Applicable.			

NA = not available, PPP = public-private partnership, PRC = People's Republic of China, SFD = Sichuan Finance Department, TA = technical assistance.

^a Government of the PRC, General Office of the State Council. 2015. *Notice of the General Office of the State Council on Forwarding the Guiding Opinions of the Ministry of Finance, the National Development and Reform Commission and the People's Bank of China on Promoting the Public-Private Partnership Mode in Public Service Field*. Guo Ban Fa [2015] No. 42. Beijing (May).

^b There is no guiding PPP policy or strategy document produced on a regular, forward basis. Developments in PPPs are made public through policy and strategy documents and other announcements, which are released as-needed as developments emerge or issues arise. Relevant websites include <https://www.mof.gov.cn/>, <https://www.ndrc.gov.cn/>, <https://www.cpppc.org/>, <https://www.mofppp.org/>, <https://www.sc.gov.cn>, <https://www.swjtu.edu.cn/>, <https://www.ssf.gov.cn/>, <https://www.chinadaily.com.cn/>, <https://www.xinhuanet.com/> and <https://www.caixin.com>. The key social media site is the PPP wiki site available via We Chat.

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Amount
Asian Development Bank^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	80.0
ii. National consultants	160.0
b. International and local travel	25.0
c. Reports, publications, and communications	10.0
2. Workshops, seminars, meetings ^b	
a. International and national workshops	30.0
b. International study tour ^c	20.0
c. Resource persons	40.0
3. Miscellaneous administration and support costs ^d	15.0
4. Contingencies	20.0
Total	400.0

Note: The technical assistance (TA) is estimated to cost \$450,000, of which contributions from the Asian Development Bank (ADB) are presented in the table above. The government will provide counterpart support in the form of office space, assistance in arranging meetings with counterpart agencies, counterpart staff and other services to the consultants, and other in-kind contributions. The value of government contribution is estimated to account for 11.1% of the total TA cost.

^a Financed by ADB's Technical Assistance Special Fund (TASF-other sources).

^b For stakeholder participation, awareness-raising events, and other related workshops within the People's Republic of China; and one international study tour. An advance payment facility will be established within the implementing agency to facilitate events and workshops. If ADB staff act as resource persons and/or facilitators, travel costs may be charged to the TA with the prior agreement of the implementing agency. Includes venue and equipment rental, incidental costs, and accommodation costs of participants. The budget for the international and national workshops is included as a provisional sum.

^c The international study tour will focus on countries that are leaders in public-private partnerships and have extensive experience with value-for-money analysis. The content and findings of the consultation will be presented in a report to be prepared by the implementing agency. Participants may include one officer fluent in English but otherwise will be at deputy director level or higher. The consultation will be arranged by the implementing agency and will occur only in eligible ADB member countries, in line with ADB's Charter requirements.

^d Includes printing costs, translations, supplies for events, printing of banners and leaflets, meeting assistants to reproduce materials, and other support for workshops.

Source: ADB staff estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. The consultants will be responsible for producing the technical assistance (TA) outputs and deliverables effectively and on time, consistent with the design and monitoring framework (DMF), and for organizing and carrying out all TA activities, including workshops. They will also assist in the preparation of an international consultation.
2. The executing agency will provide overall guidance to the TA, including coordination with government authorities and other stakeholders. The implementing agency will coordinate with the Asian Development Bank (ADB) on the day-to-day work of the consultants and will assume administrative responsibility for seminars, workshops, and an international consultation.
3. The national consultants will be engaged through a firm. The consultants will work under and be coordinated and monitored by the firm, in cooperation with the executing and implementing agencies and ADB project officers. Accordingly, the firm and its consultants will maintain close working relations with the executing agency, implementing agency, and ADB, and will regularly discuss project progress and findings. Meetings involving the firm and its consultants, the executing and implementing agencies, and ADB staff, will be held to provide guidance to the firm and its consultants and to review their reports. The firm and its consultants will help ensure that knowledge work products are disseminated (e.g., at workshops, conferences, and on the executing agency and ADB websites), and that both electronic and hard copies are made available to stakeholders.

A. National Consultants

1. Institutional Investment Advisor and Team Leader (6 person-months, intermittent)

4. The team leader will have strong expertise, extensive experience, and in-depth knowledge of institutional investment in the People's Republic of China (PRC). A solid understanding of the national and international experience with public-private partnerships (PPPs) is preferred. Experience in the preparation and/or implementation of PPP projects in the PRC is desirable. The team leader will preferably have at least 10 years of relevant experience, and a master's degree or higher qualification in law, or in finance, economics, management, or other relevant field but with strong experience in drafting or advising on relevant legal frameworks. Proficiency in English and a demonstrated record of producing knowledge products of a high standard is preferred.

5. The scope of work involves responsibility for assigning and coordinating detailed tasks to all team members and managing all team members to deliver timely outputs to high quality, research and write key outputs, and engage stakeholders. The team leader will have overall supervising responsibility for the quality and timely delivery of the TA outputs to ADB and the executing agency, ensuring (i) relevant national and international experience and lessons are factored into the TA outputs; (ii) completion of all TA activities; and (iii) that team members work in an effective, efficient, collaborative, and timely manner. In fostering implementation that ensures government ownership of the TA, the team leader will have overall supervising responsibility for the following:

- (i) implementing the TA under the guidance of the executing and implementing agencies and the ADB project officers in accordance with the terms and conditions specified in the TA paper and the agreement between the government and ADB;

- (ii) coordinating and managing the inputs, activities, and outputs of the TA consultants, including communicating with the international PPP advisor, allocating responsibilities to consultants, and monitoring the performance of consultants to achieve the results outlined in the DMF in the specified time frames; initiating and leading discussions of key implementation issues; and managing TA quality control and quality assurance;
- (iii) guiding the analytical work, identifying key issues, presenting and analyzing alternative responses, and making maximum use of related ADB TA, ensuring that relevant literature and international experience are identified and factored into the analysis; and explaining and justifying the responses recommended by the consultant team;
- (iv) assisting the executing agency to plan the international consultation by collecting recommendations as to persons and agencies to meet and questions to be investigated in each meeting, and by coordinating introductions to relevant persons and agencies;
- (v) establishing reporting arrangements with the executing and implementing agencies and ADB, and ensuring that all stakeholders are regularly informed of progress and developments in the work;
- (vi) preparing materials suitable for knowledge products and other information releases, and ensuring materials are available in Chinese and English, as appropriate to the audience(s);
- (vii) organizing the dialogue events under output 3 with the executing and implementing agencies, resource persons, and other relevant stakeholders;
- (viii) ensuring timely preparation and submission of all TA reports, and assisting with TA reviews undertaken by the executing and implementing agencies, and ADB; and
- (ix) as relevant, consulting with development partners working on related activities, ensuring that they are informed of activities and that a high level of coordination is maintained to avoid duplication or overlap of work.

6. Detailed responsibilities will include leading and managing (i) the integration of the assessment of pension funds in PPP financing in other countries into the TA project's analysis and advice; (ii) a stocktake of pension funds; (iii) a review of the readiness of pension funds to invest in PPPs; (iv) an examination of the suitability of PPPs to access pension fund financing, including case studies; (v) suggestions on improving the role of pension funds in PPP financing; and (vi) brief knowledge products on key findings and priority issues in consultation with the implementing agency and ADB. The team leader will also be responsible for ensuring the timely delivery of the reports mentioned in para 21.

2. Public–Private Partnership Specialist (6 person-months, intermittent)

7. The specialist will have strong expertise, extensive experience, and in-depth knowledge of PPPs. Experience with PPPs in the PRC is essential, such as in project preparation and implementation. Experience with PPPs in other countries and with financing issues facing PPPs in the PRC would be an advantage. The specialist would preferably have at least 10 years of relevant work experience, and a master's degree or higher qualification in finance, economics, management, or other relevant field. Proficiency in English would be an advantage.

8. Reporting to the team leader, the specialist will assist in ensuring the quality and timely delivery of the TA outputs to ADB and the executing agency, and ensuring completion of all TA activities. The specialist will provide specialist PPP input. Working from a PPP perspective, the

specialist will assist in (i) integrating the assessment of pension funds in PPP financing in other countries into the TA project's analysis and advice; (ii) stocktaking of pension funds; (iii) reviewing the readiness of pension funds to invest in PPPs; (iv) examining the suitability of PPPs to access pension fund financing, including case studies; (v) providing suggestions on improving the role of pension funds in PPP financing; and (vi) developing short knowledge products on key findings and priority issues in consultation with the implementing agency and ADB.

3. Financial Specialist (6 person-months, intermittent)

9. The specialist will have strong expertise, extensive experience, and in-depth knowledge of the PRC's financial sector. Experience with pension funds and PPPs and other ways of delivering infrastructure in the PRC would be an advantage. The specialist would preferably have at least 10 years of relevant work experience, and a master's degree or higher qualification in finance, economics, management, or other relevant field. Proficiency in English would be an advantage.

10. Reporting to the team leader, the specialist will assist in ensuring the quality and timely delivery of the TA outputs to ADB and the executing agency, and ensuring completion of all TA activities. He or she will provide specialist financial input. Working from a finance perspective, the specialist will assist in (i) integrating the assessment of pension funds in PPP financing in other countries into the TA project's analysis and advice; (ii) stocktaking pension funds; (iii) reviewing the readiness of pension funds to invest in PPPs; (iv) examining the suitability of PPPs to access pension fund financing, including case studies; (v) providing suggestions on improving the role of pension funds in PPP financing; and (vi) developing short knowledge products on key findings and priority issues in consultation with the implementing agency and ADB.

4. Pension Fund Specialist (6 person-months, intermittent)

11. The specialist will have strong expertise, extensive experience, and in-depth knowledge of the PRC's pension funds. Experience with PPPs and other ways of delivering infrastructure in the PRC would be an advantage. The specialist would preferably have at least 10 years of relevant work experience, and a master's degree or higher qualification in economics, law, management, public policy, international development, health, or other relevant field. Proficiency in English would be an advantage.

12. Reporting to the team leader, the specialist will assist in ensuring the quality and timely delivery of the TA outputs to ADB and the executing agency, and ensuring completion of all TA activities. He or she will provide specialist input on pension fund issues. Working from a pension fund perspective, the specialist will assist in (i) integrating the assessment of pension funds in PPP financing in other countries into the TA project's analysis and advice; (ii) stocktaking pension funds; (iii) reviewing the readiness of pension funds to invest in PPPs; (iv) examining the suitability of PPPs to access pension fund financing, including case studies; (v) providing suggestions on improving the role of pension funds in PPP financing; and (vi) developing short knowledge products on key findings and priority issues in consultation with the implementing agency and ADB.

5. Coordinator (6 person-months, intermittent)

13. The coordinator will have a graduate degree in economics, law, accounting, management, public policy, public administration, international development, or a related field, as well as at least 5 years of experience in a business or government environment. Proficiency in English is preferred.

14. Reporting to the team leader, the coordinator will have day-to-day responsibility for the timely administration of meeting and events, including the identification and mobilization of required resources. Detailed tasks will include (i) liaising with participants on the arrangements for events; (ii) handling all logistic requirements of the venues, including the provision of refreshments, audiovisual equipment, and materials; (iii) coordinating with external suppliers of any inputs; (iv) coordinating and consolidating inputs of resource persons to ensure smooth participation in the training; (v) pre-event planning and onsite administration of training and related activities; (vi) liquidation of expenses; and (vii) the conduct of other related tasks assigned by the team leader.

B. International Consultants

1. Public–Private Partnership Advisor (1.5 person-months, intermittent)

15. The advisor will have strong expertise, extensive experience, and in-depth knowledge of the international experience with PPPs and financing issues. A complementary understanding of institutional investment and a solid understanding of the PRC's experience with PPPs are preferred. The advisor must have at least 10 years of relevant experience, and a master's degree or higher qualification in finance, economics, management, or other relevant field. A demonstrated record of producing knowledge products of international standard is essential.

16. Reporting to the team leader, the advisor will provide the team's key source of advice on the experience of other countries with PPPs. The advisor will also analyze information from government agencies and other sources, participate in consultation to explore and understand issues and develop responses, identify and examine relevant international literature, and undertake other tasks as required by the team leader consistent with the DMF. The advisor will be responsible for working with the team leader to ensure that relevant international experience is incorporated into the conduct of the TA. The advisor will also assist in the preparation and conduct of dialogue and awareness-raising events. The PPP advisor will co-author an assessment of pension funds in PPP financing in other countries and provide advice, from an international perspective, on the alignment of the analysis and suggestions prepared by the team with good practices from other countries.

2. Institutional Investment Advisor (1.5 person-months, intermittent)

17. The advisor will have strong expertise, extensive experience, and in-depth knowledge of the international experience with institutional investment, including in asset-based investments. A complementary understanding of PPPs is preferred. The advisor must have at least 10 years of relevant experience, and a master's degree or higher qualification in finance, economics, management, or other relevant field. A demonstrated record of producing knowledge products of international standard is essential.

18. Reporting to the team leader, the advisor will provide the team's key source of advice on the experience of other countries with institutional investment. The advisor will also analyze

information from government agencies and other sources, participate in consultations to explore and understand issues and develop responses, identify and examine relevant international literature, and undertake other tasks as required by the team leader consistent with the DMF. The advisor will be responsible for working with the team leader to ensure that relevant international experience is incorporated into the conduct of the TA. The advisor will also assist in the preparation and conduct of dialogue and awareness-raising events. The PPP advisor will co-author an assessment of pension funds in PPP financing in other countries and provide advice, from an international perspective, of the alignment of the analysis and suggestions prepared by the team with good practices from other countries.

C. Resource Persons (up to 10 persons, up to 10 person-days each, national and international, intermittent)

19. The resource persons will have a degree in economics, law, finance management, public policy, international development, engineering, or a closely related field. At least 10 years' experience in either helping manage pension funds or institutional investors or in helping government agencies prepare and implement investment projects is preferred. Reporting to the team leader, the resource persons will participate in awareness-raising and dialogue events to provide specific expertise and experience relevant to the issues addressed by the event.

D. Reporting Requirements

20. The firm will be responsible for ensuring all TA reports meet high professional standards. The reports on international practices will be delivered in English, while other reports required under outputs 2 and 3 will be delivered in Chinese. As agreed between the implementing agency and ADB, the TA will fund the translation of deliverables. The reports will be of a publishable standard.

21. In addition to the specific deliverables required for each output, the firm is to produce reports to document, monitor, and assess TA activities. These reports are to be written in English. With the support of TA consultants, and respecting all confidentiality requirements, the team leader will submit the following:

- (i) **Inception report.** A brief report (maximum of five pages plus appendixes) will be submitted by month 9 providing a clear plan for implementing the TA, challenges to its success, and a summary of TA status. It will provide (a) confirmation of the TA rationale and design, (b) adjustments recommended to improve TA performance, and (c) a TA implementation schedule.
- (ii) **Quarterly progress notes.** These brief notes (maximum of two pages) will provide an update on the status of TA implementation.
- (iii) **Midterm report.** This brief report (maximum of five pages plus appendixes) will provide an update on the status of implementing the terms of reference, plans for achieving the TA objectives, a personnel schedule with accomplishments under each item of the DMF, and a detailed TA implementation schedule. This report will record activities, outputs, and outcomes directly against the TA DMF.
- (iv) **Draft final report.** This report (maximum of 10 pages plus appendixes) will (a) be submitted 2 months before completion of the TA; (b) summarize activities and results, reporting against the DMF; and (c) provide recommendations on any additional steps required to sustain the results of the TA.
- (v) **Final report.** This report will be submitted by the consultants within 1 month of receipt of the comments on the draft final report from the executing and implementing agencies and ADB, and will respond to the comments received.