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Restoring Confidence in Public–Private Partnerships

Reforming Risk Allocation and Creating More Collaborative PPPs

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Executive Summary

As part of the work of the Asian Development Bank (ADB) on infrastructure governance, sustainability, and the principles of Quality Infrastructure Investment, this discussion paper has been prepared, at the request of the ADB, to inform ADB staff and officials in ADB developing member countries. It describes the loss of confidence in public–private partnership (PPP) transactions that has led to an ongoing decline in their global use and argues that two of the major contributors to this loss of confidence are the approaches taken in PPP contracts to risk allocation and dispute resolution. The paper examines, in summary form, alternative contractual arrangements—including arrangements employed for transactions that are not PPPs—and analyzes the suitability of their use for PPPs, in the context of the development conditions that are likely to exist following the coronavirus disease (COVID-19) pandemic. Finally, the discussion paper introduces a series of suggested incremental reforms to current PPP contracting practices, incorporating aspects of the various alternative arrangements, and taking into account the associated governance challenges. This brief was financed under the technical assistance for Strengthening Fiscal Governance and Sustainability in Public-Private Partnerships.

1. Introduction: The Necessity of, and the Opportunity for, Public–Private Partnership Reform

At a time when infrastructure PPPs are acutely needed, the global level of PPP transactions is declining—not in every country, but on a widespread basis. The Private Participation in Infrastructure (PPI) database² again reported a

reduction in developing and emerging market PPP investment commitments in 2019—relative to 2018, a trend which began in 2012 (Figure 1). In advanced economies, the United Kingdom (UK) has announced that it will no longer procure national-level infrastructure using the “Private Finance Initiative” approach (a form of PPP developed in the UK),³ and major corporate entities, such as SNC-Lavalin Group Inc. and

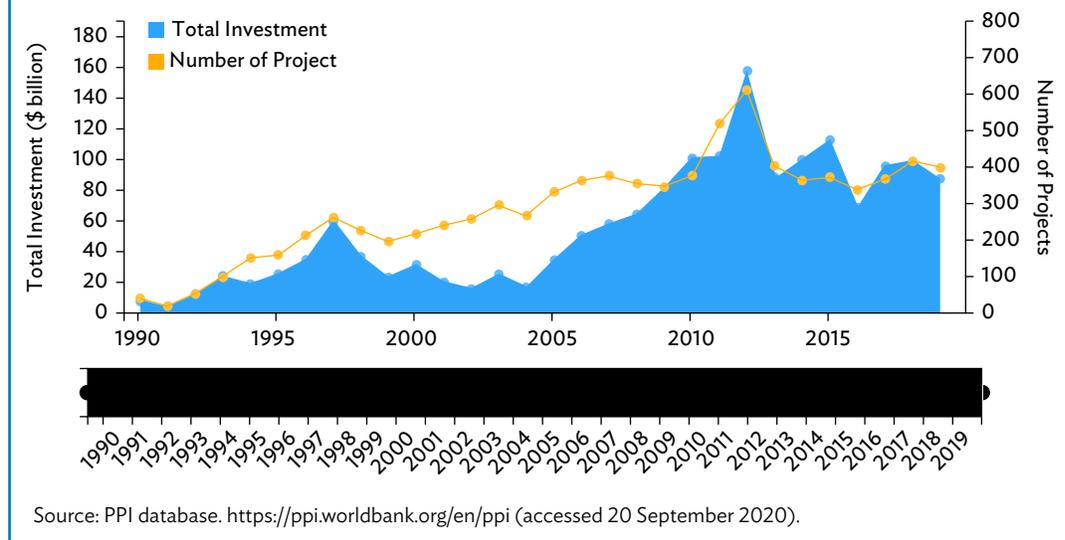
For inquiries, comments, and suggestions on this governance brief, please contact Hanif Rahemtulla at +632 8682 6997 or hrahemtulla@adb.org, Governance Thematic Group, SDCC, ADB. Previous issues of *The Governance Brief* can be accessed at <http://www.adb.org/publications/series/governance-briefs>.

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² The World Bank. 2019. <https://ppi.worldbank.org/en/ppi> (accessed 22 September 2020).

³ Government of the United Kingdom. 2018. Private Finance Initiative (PFI) and Private Finance 2 (PF2): Budget 2018 Brief. Policy paper. <https://www.gov.uk/government/publications/private-finance-initiative-pfi-and-private-finance-2-pf2-budget-2018-brief>. It should be noted that this policy does not apply to projects carried out by devolved governments, such as in Scotland and Wales.

**Figure 1: Private Participation in Infrastructure Database
Dashboard Data on Public–Private Partnership Projects, 1990–2019**



At the heart of every PPP transaction is the allocation of risks between the public and private partners.

the United States (US) division of Skanska AB, have indicated that they will no longer bid on PPP contracts.⁴

The reasons for this decline are numerous. Among other concerns, there is, on the government side, a perception that PPPs are not delivering value for money and, on the private side, that the risks associated with PPP transactions have become excessive and unpredictable. Underpinning many of these concerns with PPPs is the sense that the transactions are extremely inflexible, with the parties bound by long-term contracts and financing arrangements that are ill-suited to dealing with unforeseen changes, particularly in an era of unprecedented technological and social change. This sentiment was widespread even before the onset of the coronavirus disease (COVID-19) pandemic, and the concern regarding the inflexibility of PPPs has been significantly exacerbated by the pandemic.

Given the enormity of the global infrastructure gap—particularly in those countries that are well short of meeting the infrastructure targets in the United Nations’ Sustainable Development

Goals—there remains a critical need for investment in the sector. At the same time, various private sources of capital (such as pension funds and other institutional investors) are eager to find long-term viable investment opportunities. Arguably, the need for such private investment in infrastructure may well increase in the next few years, as governments focus public spending on other sectors in response to the pandemic. Accordingly, and in light of the loss of confidence in existing PPP arrangements, there is an urgent need to examine alternatives to the current models. In particular, there is a need to develop more flexible and collaborative forms of PPP contracts that can better meet the objectives of both the public and the private partners and deliver the cost-effective quality infrastructure facilities and services people require.

At the heart of every PPP transaction is the allocation of risks between the public and private partners. Traditionally, the process of drafting a PPP contract has involved a detailed identification of every conceivable risk associated with the project, and the development of a complex risk matrix, assigning each individual risk to either the public or the private party, with a small group of risks being shared.

⁴ SNC-Lavalin. 2019. SNC-Lavalin Forges New Strategic Direction with Corporate Reorganization. Press release. <https://www.snc-lavalin.com/en/media/press-releases/2019/22-07-2019>; and *Global Construction Review*. 2018. Skanska US Pulls Out of PPP Infrastructure Market after \$100m Hit. 26 October. <https://www.globalconstructionreview.com/companies/skanska-us-pulls-out-ppp-infrastructure-market-aft/>.

This approach necessarily leads to a heightened sense of separation between the public and private parties—even though, ideally, they are meant to be working as partners to deliver the project on a long-term basis. Accordingly, if PPPs are to become more flexible and collaborative, the treatment of risks must be a major area of examination.

Another critical element in every PPP contract is the methodology for handling disputes between the parties. This is of particular importance in the context of PPPs, given the very long-term nature of the projects, which can stretch over decades—during which time disagreements are very likely to arise. Again, therefore, if PPPs are to become more flexible and collaborative, close attention must be paid to the process of dispute resolution.

Against this background, this discussion paper examines a number of alternative approaches to risk allocation/risk sharing and to dispute resolution, with a view to developing new, more collaborative, parameters for PPP contracting. The paper does not suggest that current issues with risk allocation and dispute resolution are the sole causes of the overall decline in PPP activity, but it does argue that addressing those issues will significantly help to restore confidence in PPPs among governments, the private sector, and the public at large.

2. Risk Allocation and Risk Sharing

A key feature of every PPP transaction is the transfer of specified risks from the public partner (i.e., the government contracting authority) to the private partner (i.e., the project company). From a government perspective, this is one of the principal mechanisms for achieving value for money in a PPP transaction—by having the private sector assume certain risks that would normally remain with the government in a traditional public works project. From a private sector perspective, project companies are willing to accept various types of risks where the company has the ability to control them, and thereby earn profit as a reward for managing those risks more effectively and efficiently.

As indicated, the allocation of risks between the public and private parties in a PPP transaction is at the center of the PPP contract-drafting process. Recently, various guidance materials have been developed by governments and by international organizations to help with this process, notably including:

- the *PPP Risk Allocation Tool, 2019 Edition*,⁵ developed by the G20's Global Infrastructure Hub (GI Hub); and
- the *Guidance on PPP Contractual Provisions, 2019 Edition*,⁶ developed by the World Bank.

From these tools, it can be seen that the risk allocation process is extremely detailed and carefully tailored to the specific parameters of individual PPP projects—the GI Hub tool, for instance, consists of four volumes of sample risk matrices across various sectors, totaling more than 750 pages in length.

However, on a very general and highly simplified basis, the risk allocation in a typical PPP transaction will usually be similar to that shown in Table 1.

An important difference, particularly in regard to the treatment of “demand risk,” i.e., the risk that the usage of the infrastructure facilities and services will be less than anticipated, exists between the two main types of PPP contracts, namely:

- Availability Contracts: where the private partner receives regular payments from the government partner if the infrastructure facility is “available for use” in accordance with the terms of the PPP contract, regardless of the level of usage that is actually taking place (which might, for example, be the approach used on a PPP school building project); and
- User-Pay Contracts: where the revenue for the private partner comes wholly or partly through fees paid by end-users (which might, for example, be the approach used on a PPP toll-road project).

In the case of an Availability Contract project, the demand risk is largely assumed by the public partner; whereas under a User-Pay Contract, the private partner normally accepts some or all of the demand risks.

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⁵ Available at: <https://ppp-risk.gihub.org/>. In addition, there is also some guidance on the allocation of technical risks in the GI Hub's September 2019 *Reference Guide on Output Specifications for Quality Infrastructure*. <https://www.gihub.org/infrastructure-output-specifications/>.

⁶ *Guidance on PPP Contractual Provisions, 2019 Edition*. <https://library.pppknowledge.org/documents/5749/download>.

Table 1: Simplified Risk Matrix for a Typical Public–Private Partnership Project

Risks	Private Partner	Public Partner	Shared
Design Phase			
Design cost overruns	✓		
Design delays	✓		
Fitness for purpose risks	✓		
Financing risks	✓		
Land acquisition and resettlement risks		✓	
Construction Phase			
Construction cost overruns	✓		
Construction delays	✓		
Cost overruns and delays associated with the preparation of documentation for construction-related government permits	✓		
Cost overruns and delays associated with the issuance of construction-related government permits		✓	
Selected environmental risks (depending on the nature of the project)			✓
Operations Phase			
Operations and maintenance cost overruns	✓		
Operation and maintenance delays	✓		
Operational performance risks	✓		
Risks associated with technological changes	✓		
Cost overruns and delays associated with the preparation of documentation for operation-related government permits	✓		
Cost overruns and delays associated with the issuance of operation-related government permits		✓	
Major equipment replacement and repair	✓		
Demand risk (depending on the nature of the project, as noted in the paragraphs that follow)			✓
Handover Phase			
Handover cost overruns and delays	✓		
Compliance with handover performance requirements	✓		
Throughout the Project			
Cost overruns and delays associated with changes in law and government policy (other than those associated with certain limited types of changes for which the private partner is responsible)		✓	
Cost overruns and delays associated with certain limited types of changes in law and government policy (generally, not including discriminatory or project-specific changes, or changes that necessitate capital expenditures during the operations phase)	✓		
Force Majeure risks			✓

Source: Author.

Frequently, the main points of friction in PPP transactions are related to particular aspects of risk allocation. For instance, many private sector partners have been frustrated by construction and operation cost overruns and delays that have arisen due to wholly unanticipated events (such as a global pandemic) which may not precisely fall within the ambit of force majeure as defined in a given PPP contract. Similarly, the issue of unexpectedly low demand has frequently led to serious difficulties for the partner (or partners) in a PPP transaction to whom demand risk has been assigned. Looking toward the future, there may well be many situations where even greater challenges will arise due to the risk of technological change, i.e., the possibility that an infrastructure facility may become obsolete due to the advent of new technologies (such as post-pandemic digital innovations that further erode the need for traditional transport infrastructure). These “points of friction” are a major cause of the increasing loss of confidence—in both the public and private sectors—in PPPs.

A useful analysis of various current issues associated with risk allocation in public–private infrastructure transactions is set out in the World Economic Forum (WEF) January 2020 community paper on *Rebalancing Risk Allocation in Infrastructure*. The paper discusses seven specific risk categories—including macroeconomic risks, political risks, and technological change risks—where, in the opinion of the authors, new approaches are required “to enhance collaboration between industry and the public sector.” The WEF paper also makes the point that governments must “build and sustain capacity in the public sector,” and develop “professional human capacity that can work on even ground with the private sector.”⁷

3. Dispute Resolution

Alongside the issue of risk allocation is the closely related topic of dispute resolution. Typically, PPP contracts call for a tiered or “staircase” approach to resolving disputes between the public and

private parties, with each step in the process being increasingly formal.

This staircase approach normally involves the following steps:

- the PPP contract provides that, initially, the parties should attempt to resolve the dispute through good faith negotiations between senior representatives of each party, who have the ability to agree upon a settlement;
- if this fails, the contract may call for the appointment of a mediator to act as a neutral facilitator of an amicable resolution;
- in situations where a dispute concerns a specific technical issue, the contract may provide for the appointment of an independent expert, or expert panel, to make a determination that is meant to be followed by the parties; and
- ultimately, if none of these techniques achieve a final solution of the dispute, the PPP contract will normally call for some form of arbitration or court litigation (which the contract may require to be held in a neutral country), so as to impose a binding judgment upon the parties.⁸

As indicated, the long-term and complex nature of PPP projects is such that, inevitably, disagreements will arise between the parties—frequently due to risk allocation “frictions.” If such disagreements are not quickly addressed, they can escalate into full disputes, triggering the staircase process as earlier described. By this point, the positions of the parties will have already begun to harden, such that the informal/amicable steps to be taken at the beginning of the dispute resolution staircase are not effective. This, in turn, drives the parties to the expensive, time-consuming, and highly adversarial processes of arbitration and/or litigation—which oftentimes lead to a complete breakdown of what was supposed to be a partnering relationship between the parties.⁹

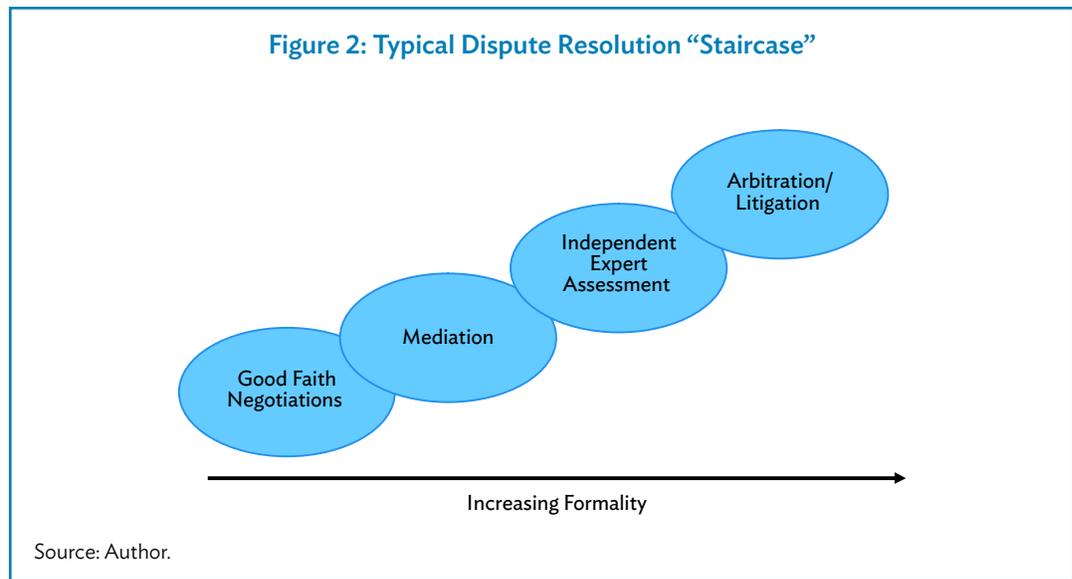
In addition, the failure of dispute processes to achieve a successful result has often led one or both parties in a PPP transaction to seek the renegotiation of their contract or, in extreme cases,

The long-term and complex nature of PPP projects is such that, inevitably, disagreements will arise between the parties—frequently due to risk allocation “frictions.”

⁷ World Economic Forum. 2020. *Rebalancing Risk Allocation in Infrastructure: A Collective Effort to Improve Collaboration between the Public and Private Sectors*. Community paper. http://www3.weforum.org/docs/WEF_Risk_Allocation_Report.pdf (quotes are from pages 6 and 11).

⁸ A good description of these dispute resolution techniques is found in Chapter 11 of the World Bank *Guidance on PPP Contractual Provisions, 2019 Edition* (see footnote 6).

⁹ A detailed discussion of disputes in PPP transactions can be found in Chapter 5 of the GI Hub’s July 2018 *PPP Contract Management Tool*. <https://managingppp.gihub.org/>. The GI Hub tool includes data on the nature and prevalence of disputes, based on a representative sampling of PPP projects, selected across all regions.



its termination. The significant challenges which both the public and private sectors have faced in dealing with such renegotiations and terminations have, similarly, been a key factor in undermining confidence in PPP transactions.¹⁰

4. Alternative Approaches— Advantages and Disadvantages

PPPs are not the only type of infrastructure transactions that have given rise to a sense of frustration among the contracting parties. Calls for reform have also been voiced in other contexts, notably including pure construction contracts, and contracts in resource extraction sectors such as mining, oil, and gas. In many instances, reform initiatives have been in the direction of more collaborative approaches, so as to address the perceived inefficiencies associated with the typically adversarial relations between the contracting parties. In this section of this paper, some of these more collaborative approaches are examined, with brief considerations of the advantages and disadvantages of attempting to apply the approach to PPPs. This section also briefly discusses various modifications to the standard form of PPPs, as well

as some alternatives to PPPs, which have been proposed or piloted.

Project Partnering. Over the last few decades, the construction industry has experimented with various types of so-called “relational project delivery arrangements,” designed to foster greater harmony between owners and contractors. One of the first of these arrangements is known as “Project Partnering,” whereby the contracting parties make a commitment, in the form of a charter document, to achieve specific business objectives (such as the construction of a new building), through “a process of establishing a moral agreement or charter between the project team members along with a moral framework to assist in its successful implementation.”¹¹ It is important to note, however, that this commitment does not constitute a binding agreement between the parties.

In a formal sense, the concept of Project Partnering is said to have originated in the US, where it was launched by the United States Army Corps of Engineers in 1988. However, it has been argued that the idea of Project Partnering is based on quality management and strategic partnering principles previously developed in Japan.¹²

¹⁰ The GI Hub’s *PPP Contract Management Tool* (see footnote 9) also contains, in Chapter 4, a discussion of the topic of PPP contract renegotiations, including data on the frequency of such renegotiations.

¹¹ Government of New South Wales. 1993. *Capital Project Procurement Manual Partnering Guidelines*. <http://classic.austlii.edu.au/au/journals/AUConstrLawNlr/1993/145.pdf>.

¹² P. Lahdenperä. 2012. Making Sense of the Multi-party Contractual Arrangements of Project Partnering, Project Alliances and Integrated Project Delivery. *Construction Management and Economics*. 30 (1). pp. 57–79; abstract available at <https://doi.org/10.1080/01446193.2011.648947>.

Although the concept of Project Partnering has enjoyed some success in Australia, the US, the UK, and elsewhere, enthusiasm for it has diminished. A key problem is that Project Partnering arrangements were found to be useful in dealing with relatively minor problems, but they were distinctly less effective when serious disputes arose. In the latter situation, the nonbinding nature of the partnership charter meant that the parties would often revert to enforcing their rights under the formal contract agreement. This, in turn, would cause the parties to become even more mistrustful, given the sense of betrayal of the partnership principles.¹³

Recently, however, many of the principles of Project Partnering have been adopted in New Zealand, under that country's 2019 *Construction Sector Accord*, which embodies a "shared commitment between government and industry to transform the construction sector," including a commitment to "better risk management and fairer risk allocation."¹⁴

Alliance Contracting. The concept of Alliance Contracting had its origins in the UK's oil and gas industry in the early 1990s, but it has been subsequently adopted by the construction sector in a number of countries, notably including Australia—partly in response to the perceived deficiencies of project partnering. One of its distinctive features is that the parties to an Alliance Contract make a formal, binding commitment to share risks and rewards (with a few defined exceptions), under a "no blame" regime. As part of this arrangement, the parties agree, at the outset of the contract, on a target cost for the project—with the parties thereafter transparently sharing the gains and losses if the actual costs are more than or less than the target amount.

As indicated in the Government of Australia's 2015 *National Alliance Contracting Guidelines*:

The most significant difference between traditional contracting methods and alliance contracting is that in alliancing, all project risk management and outcomes are collectively shared by the participants.

In more traditional methods of risk allocation, specific risks are allocated to participants who are individually responsible for best managing the risk and bearing the risk outcome. This concept of collective risk sharing provides the foundation for the characteristics that underpin alliance contracting including collaboration, making best-for-project decisions and innovations.¹⁵

In Alliance Contracting transactions, the method for procuring the contractor(s) usually involves a combination of both price and non-price elements. The Australian *Guidelines* designate the procuring entity as the "owner" and the contractor(s) as the "non-owner participant(s)" (NOP), and indicate that the non-price elements in the procurement process will normally include considerations such as "the culture of the integrated NOP/Owner team members."¹⁶

It is also noteworthy that, under an alliance contract, the dispute resolution mechanisms are, essentially, of an informal nature. As indicated in the Australian *Guidelines*:

"No litigation over contractual disputes: Alliances are characterised by the key principle that, subject to certain exceptions, there is to be no litigation between the Participants."¹⁷

Clearly, an Alliance Contract is an arrangement significantly different from a standard PPP transaction. And even the advocates of Alliance Contracting acknowledge that the approach should only be used selectively, ideally on projects where the risks are unpredictable and/or where the cost of transferring risks to the contractor(s) would be prohibitive. As noted in the Australian Government's 2015 *National Alliance Contracting Guidelines Guidance Note 3 – Key Risk Areas and Trade-Offs*:

"A fundamental cornerstone of alliancing is that traditional contractual legal protections ... are traded by the government ... in exchange for Non-Owner Participants bringing to the project their good faith in acting with the highest level of 'integrity' for the 'best interests of the project'.¹⁸

¹³ C. MacDonald. 2005. What Are the Important Differences between Partnering and Alliance Procurement Models? *Alliance Contracting Electric Law Journal*. <http://alliancecontractingelectroniclawjournal.com/wp-content/uploads/2017/04/MacDonald-C.-2005-%E2%80%98What-are-the-Important-Differences-Between-Partnering-and-Alliance-Procurement-Models-and-Why-are-the-Terms-so-Seldom-Confused%E2%80%99.pdf>.

¹⁴ *Construction Sector Accord*. 2019. *A Shared Commitment Between Government and Industry to Transform the Construction Sector*. <https://www.constructionaccord.nz/assets/Construction-Accord/files/0930eac2bb/construction-sector-accord.pdf>.

¹⁵ Government of Australia. 2015. *National Alliance Contracting Guidelines*. https://www.infrastructure.gov.au/infrastructure/ngpd/files/National_Guide_to_Alliance_Contracting.pdf.

¹⁶ See footnote 15 (quote found on page 81).

¹⁷ See footnote 15 (quote found on page 44).

¹⁸ Government of Australia. 2015. *National Alliance Contracting Guidelines Guidance Note 3 – Key Risk Areas and Trade-Offs*. https://www.infrastructure.gov.au/infrastructure/ngpd/files/NACG_GN3.pdf.

From both the government and the private sector perspectives, there are some significant challenges in using Alliance Contracting for PPP projects, including:

- the nature of the Alliance Contract relationship means that governments need to exercise great care to select highly trustworthy private sector contractors, that have the requisite collaborative (as opposed to adversarial) mindset—a requirement which significantly complicates competitive public procurement processes, and which requires a strong procurement governance framework;
- the uncertainties associated with the government’s risk profile in an Alliance Contract can present significant challenges in terms of predictive budgeting for project contingencies;
- given that an Alliance Contract is focused on avoiding arbitration/litigation, there is an increased reliance on nonadversarial forms of dispute resolution, with which the contracting parties may not be familiar;
- the collective assumption of risk will require innovative forms of insurance—in some jurisdictions, so-called “Integrated Project Insurance” policies can be purchased, which provide coverage for shared risks on a blame-free basis, but these types of policies are not universally available, and can be costly; and
- similarly, the use of a nontraditional form of contracting may seriously complicate the availability of project financing, given the extent of the risks that are shared by the project company—and if some of the financing is coming from a multilateral development bank, the institution will need to have lending rules that allow for the financing of Alliance Contracts which, as indicated, are qualitatively different from both traditional public works contracts and from standard PPP contracts.

Integrated Project Delivery. Another, relatively recent, “relational project delivery arrangement” is the concept known as Integrated Project Delivery (IPD), which first began to be used early in this century, primarily in the US construction industry.

In an IPD project, the owner, the contractor, the subcontractors, architects, and other concerned parties enter into a legally binding project agreement at a very early stage, when the project is still being planned. IPD also stresses the use of advanced technologies, such as building information modelling systems, to make the planning and construction process as efficient as possible.¹⁹ To some extent, the same principles apply to the so-called “Project 13” framework developed by the UK Institute of Civil Engineers.²⁰

Given that one of the critical features of an IPD project is the early formation of the project team, before the project is defined, it has been asserted in academic studies that “if the project is sent out for bid or tender, the project cannot be considered an IPD project.”²¹

Accordingly, the IPD approach may be problematic for a public authority wishing to undertake a PPP project, for many of the reasons set out earlier in relation to Alliance Contracting.

Competitive Dialogue and other forms of Early Contractor Involvement. There are, however, other forms of so-called Early Contractor Involvement (ECI) models that allow for some degree of early collaborative interaction between government contracting authorities and private sector project developers while still preserving a competitive bidding process. One such initiative is the European Union’s Competitive Dialogue approach, whereby the government contracting authority may share detailed information with bidders, such as the proposed risk matrix and a reference design for the project, and then enter into a dialogue with the bidders to discuss design parameters before submissions are finalized. Similar arrangements are also found in other countries.

A 2010 study of the Competitive Dialogue process by the European PPP Expertise Centre (a division of the European Investment Bank) entitled *Procurement of PPP and the Use of Competitive Dialogue in Europe*, stated that users of the Competitive Dialogue approach reported that it had led to “improved communications between the contracting authority

¹⁹ Footnote 12, pp. 70–74.

²⁰ *Project 13*. 2018. <http://www.p13.org.uk/>.

²¹ P. Raisbeck, R. Millie, and A. Maher. 2010. *Assessing Integrated Project Delivery: A Comparative Analysis of IPD and Alliance Contracting Procurement Routes*. <https://pdfs.semanticscholar.org/2b27/8d04d945394eb3037725fe2d41aeacf6f517.pdf>.

and the bidders.” However, users noted that “it is a complex procedure, with a negative impact on procurement costs and time.” It was also reported that “most contracting authorities are not well prepared to conduct such complex proceedings.”²²

In a major study undertaken in the 2018 International Transport Forum (ITF) of the Organisation for Economic Co-operation and Development (OECD) entitled *Private Investment in Transport Infrastructure*, it was noted that the competitive dialogue process had been used very infrequently for European Union transport sector procurements during the decade between 2006 and 2016—specifically, for only 15 of the 1,505 transport projects procured during that time period.²³

Other forms of ECI models have been utilized in various jurisdictions, notably in Scandinavian countries and, recently, in Singapore.²⁴ Here again, however, it is noteworthy that the academic literature on these ECI models has stressed the governance challenges which contracting authorities have faced in using these arrangements.²⁵

The same point, in regard to the need to strengthen the capacity of government contracting authorities to handle partnership-style contracts, was made in the recently-released July 2020 *G20/OECD Report on the Collaboration with Institutional Investors and Asset Managers on Infrastructure: Investor Proposals and the Way Forward*.²⁶

Economic Stability Clauses. In countries with a civil law (as opposed to common law) tradition, there are a number of concession-style contracts, both for resource extraction concessions and also for PPP concessions, which include provisions to restore the economic equilibrium of the parties in the event of certain adverse circumstances.

These clauses typically provide for relief in the event of changes in law or tax regimes—which is an arrangement similar to that found in PPP contracts in common law jurisdictions. However, these civil law concessions also have clauses providing relief for the concessionaire in the event of “unforeseen changes in economic circumstances,” i.e., events outside of the concessionaire’s control which cause a substantial deterioration in the financial viability of the project. Importantly, these so-called hardship clauses are able to provide relief even if the unforeseen event does not make it impossible to perform the contract, i.e., even when the force majeure provisions in the contract are not triggered.²⁷

The operation of the hardship clauses necessitates an agreement between the contracting parties, at the outset of the project, as to what are the anticipated financial parameters of the project during each year of its lifespan, in the form of a financial model that, in some instances, is updated on a regular basis during the course of the project. The parties also agree, at the outset of the contract, on the bandwidth within which the actual financial performance can take place without triggering the hardship provisions. However, if an event occurs outside of the control of the concessionaire, whereby the concessionaire experiences financial hardship which exceeds the bandwidth levels, then the parties meet and agree upon adjustments to the contract, so as to restore the ability of the concessionaire to continue to carry out the contract.²⁸

Although there has been a great deal of experience in civil law countries with these economic stability clauses, the adoption of this approach for PPP transactions in common law jurisdictions could present significant challenges. In particular, the hardship provisions are based, to some extent,

²² European PPP Expertise Centre. *Procurement of PPP and the use of Competitive Dialogue in Europe*. https://www.eib.org/attachments/epec/epec_procurement_ppp_competitive_dialogue_en.pdf.

²³ International Transport Forum. 2018. *Private Investment in Transport Infrastructure: Dealing with Uncertainty in Contracts*. <https://www.itf-oecd.org/private-investment-transport-infrastructure-uncertainty>.

²⁴ A description of the ECI processes used in Singapore can be found at https://www1.bca.gov.sg/docs/default-source/docs-corp-procurement/eci_guide/68ff94dcf034bfdba3b7fb950b1cdb0.pdf?sfvrsn=c8fb403a_0.

²⁵ P. Wondimu et al. 2017. *Implementation of Early Contractor Involvement (ECI) in Norwegian Bridge Project's Procurement*. https://www.researchgate.net/publication/319930777_Implementation_of_Early_Contractor_Involvement_ECI_in_Norwegian_Bridge_Projects_Procurement.

²⁶ OECD. 2020. *G20/OECD Report on the Collaboration with Institutional Investors and Asset Managers on Infrastructure*. <http://www.oecd.org/finance/g20-collaboration-with-institutional-investors-and-asset-managers-on-infrastructure.htm>.

²⁷ United Nations Economic Commission for Europe Working Party on Public-Private Partnerships. 2017. *Informal Document No. 3*. 14 November. https://www.unece.org/fileadmin/DAM/ceci/documents/2017/PPP/WP/ECE_CECL_WP_PPP_2017_INF.3.pdf.

²⁸ Financial models are typically developed for all PPP projects, in both common law and civil law jurisdictions. However, in a civil law contract with a hardship clause, the financial model is a critical aspect of the process whereby adjustments are made to restore economic stability.

on the parties “agreeing to agree,” i.e., agreeing to resolve an issue by means of a future agreement, which is a problematic concept in the common law tradition. In addition, such an arrangement may cause concerns for government authorities in terms of being clearly able to demonstrate value for money throughout the life of the PPP project. Also, the administration of economic equilibrium clauses can be challenging in terms of governance issues, given the discretionary decisions that need to be made by government officials or judicial/arbitral authorities.

Regulatory Asset-Based Approach. For many years, infrastructure facilities in certain sectors have been built and operated under a framework that is quite different from those which are used for PPPs and for public works projects. That framework is the Regulatory Asset-Based (RAB) approach, under which regulated companies, such as electric utilities, conduct their business.

Under the traditional RAB approach, an economic regulator, in the form of a public utilities commission or similar entity, sets the tariffs to be charged by the regulated utility to end users. To do this, the economic regulator monitors both the utility’s operating costs and the capital investments which the utility company makes in respect of its “asset base” facilities. The regulator then includes, in the tariff, an amount to cover the allowed operating costs, plus the debt servicing cost of the permitted investments, plus an allowed return upon the equity investment which the shareholders of the utility company have made in the “asset base” facilities. This is reviewed and adjusted by the regulator on a periodic basis and, in many jurisdictions, regulators have refined the basic RAB approach by developing performance-based methodologies for incentivizing utilities to deliver their services as efficiently as possible between each review.

The ITF study on private investment in transport infrastructure undertook a detailed comparison of the standard PPP model with the RAB approach. The authors argued that:

“The regulatory asset base (RAB) model is an alternative to a PPP for infrastructure projects where demand cannot be managed well or the private operator is not exposed to serious competition.

This is a long-term approach to infrastructure investment and management and may take several years to introduce. Motorway networks are a prime candidate. The RAB model does not necessarily rely on user charges for funding. It ensures transparency in terms of full cost recovery and provides efficiency incentives that are normally lacking under public governance.”²⁹

Undoubtedly, the RAB approach has been extremely effective in delivering reliable infrastructure services from utility companies in many jurisdictions for several decades. However, it has been subject to criticisms, one of which is that the asset base of a regulated utility contains a collection of assets, with the result being that individual assets are not subject to the same cost discipline as would apply to a PPP project facility. In addition, it has been argued that information asymmetries between large and well-staffed utility companies and the normally much smaller utility commissions have led to situations where the regulator does not have the ability to monitor and control the investments and operations of the utility companies in an effective manner—with the result being that tariffs are set either too low or too high. This problem is particularly acute in developing and emerging countries, where the utility commissions may not have the governance capacities that accrue from many years of institutional experience.

Indeed, it was for this latter reason that it was suggested, in a 2003 World Bank discussion paper, that privatized electricity distribution utilities should not have their revenues determined solely by regulatory agencies but, instead, should be “regulated by contract,” i.e., under a concession or PPP-style agreement between the government and the private utility company.³⁰

It could be argued that the presence of restrictive regulatory controls may also impede innovative approaches to the delivery of infrastructure services—which is a key benefit of the PPP model. However, it should be acknowledged that regulated industries have been able to cope with structural change—such as the transition to competitive power markets for electricity generation. In a number of jurisdictions, regulators were able to deal successfully with the obsolescence costs associated with that structural

²⁹ See footnote 23 for more information.

³⁰ T. Bakovic et al. 2003. Regulation By Contract: A New Way to Privatize Electricity Distribution?. *World Bank Working Paper No. 14*. Washington, DC. <http://documents1.worldbank.org/curated/en/193741468769519824/pdf/271430PAPER0Regulation0by0contract.pdf>.

change, by adding “transition charges” to the tariffs of end-use customers—an approach which may be attractive for dealing with the challenge of unforeseen technological changes, as earlier discussed.

Against this background, it has been suggested that it may be possible to combine certain aspects of the project finance (i.e., PPP) approach with the RAB approach, so as to achieve optimal efficiencies. In the UK, a version of this concept—characterized as the “Regulated Infrastructure Investment” model—was piloted in 2015 for the Thames Tideway Tunnel project.³¹ In 2018, the ITF undertook a review of this project, and concluded that:

While the specific target price and government support levels may raise concerns, the broader hybrid model may be capable of delivering the best possible value from private financing of large and potentially risky public infrastructure investment. Opportunities for replication of the model will be, however, confined to jurisdictions with an ability to undertake detailed planning and a sophisticated, robust regulatory capacity.³²

Government Equity Participation

Arrangements. Partly in response to concerns that the private sector was earning so-called windfall profits under PPP transactions, with unreasonably high returns on equity investments, some governments have developed programs whereby a government authority makes some or all of the equity investment in the project, and takes an active role in managing the project company.

Within the UK, there are two current examples of this approach, namely the Non-Profit Distributing (NPD) program in Scotland³³ and the Mutual Investment Model (MIM) program in Wales,³⁴ both of which were designed to replace the Project Finance Initiative (PFI) PPP-style transactions

which had previously taken place throughout the UK.

Under the Scottish NPD program, all equity contributions are made by the government, with the private partner arranging for the debt financing. The private partner is then paid a fixed fee to cover the debt servicing costs for the required capital investment, plus the cost of operating and maintaining the infrastructure facility. Under the Wales MIM program, the government contributes a portion of the equity investment, and thereby shares in the profits earned by the project company. Under both programs, the government appoints a “Public Interest Director,” who takes an active role in the management of the project company.

A different form of government equity participation, with a different rationale, has been used on many of the PPP projects undertaken in the People’s Republic of China (PRC) in recent years. Within the PRC, the contractual counterparty to the government contracting authority is known as the “social capital investor” and, frequently, government contracting authorities will acquire a minority interest (usually in the order of 10%–20%) of the equity in the project company, with the social capital investor being the majority shareholder.

One of the distinctive features of PPPs in the PRC is that, in many projects, the social capital investor is a state-owned enterprise (SOE).³⁵ In such situations, the participation of the contracting authority as an equity shareholder of the project company results in a situation where the government authority is, in effect, a joint shareholder with another government-controlled entity.

A paper published by C.Y. Chang and S. Chen in 2016 suggested that this arrangement allows for risk allocation to be vaguely defined in PRC PPP contracts, because both of the parties are

³¹ The Infrastructure Forum. 2020. *Regulated Infrastructure Investment – Innovation and Opportunity*. https://fea715ce-3c56-4c71-9893-fla800dfb282.filesusr.com/ugd/d9a995_fc8eadfc7e074489bae9077bfd16dd23.pdf.

³² International Transport Forum. 2018. *The Thames Tideway Tunnel: A Hybrid Approach to Infrastructure Delivery*. https://www.itf-oecd.org/sites/default/files/docs/thames-tideway-tunnel_3.pdf.

³³ Scottish Futures Trust. 2011. *NPD Model Explanatory Note*. [https://www.scottishfuturestrust.org.uk/files/publications/Explanatory_Note_on_the_NPD_Model_\(Updated_December_2011\).pdf](https://www.scottishfuturestrust.org.uk/files/publications/Explanatory_Note_on_the_NPD_Model_(Updated_December_2011).pdf). December.

³⁴ Government of Wales. 2017. *Mutual Investment Model for Infrastructure Investment*. <https://gov.wales/mutual-investment-model-infrastructure-investment>.

³⁵ On 15 June 2020, the PRC PPP Center (a division of the PRC’s Ministry of Finance) released its *National PPP Integrated Information Platform Project Management Database Annual Report 2019*. <http://www.cpppc.org/en/djyw/999256.jhtml>. On page 61 of the report, it is noted that, of the 6,330 projects in the national PPP database that had achieved commercial closing (the point where a PPP contract is signed), there were a total of 11,402 “commercial parties” (i.e., the individual companies and consortia of companies that constituted the social capital investors). Of these 11,402 “commercial parties,” a total of 5,934 (52%) are SOEs.

government entities with equivalent status.³⁶ The authors of the paper illustrate this with the case study of an urban road project, in which the government contracting authority was the municipal government of Anqing and the winning bidder was the Beijing Urban Construction Investment & Development Company (BUCID), an SOE owned by the municipal government of Beijing. The project company was established as a joint venture, with an 88% equity contribution from BUCID and a 12% contribution through a company established by Anqing. After discussing the ranking arrangements for government entities in the PRC, the authors observed that, “*In the ranking system, BUCID is equivalent to the Anqing city government and that puts both parties on equal footing in resolving disputes, which in turn can help them settle disagreements in mutually agreeable terms.*”

Apart from these examples from the UK and the PRC, other forms of “common ownership” approaches have also been proposed, such as the profit-participation and third-party investment models suggested by institutional investors in the G20/OECD *Report on Investor Proposals and the Way Forward*.³⁷ Key to these arrangements is the existence of a shared collaborative vision between long-term investors and the concerned government.

Although the use of government equity participation arrangements is somewhat limited globally, some lessons can be drawn from the experience to date. The programs do seem to give governments more confidence that they are achieving value for money, and the shared management arrangements may create an enhanced sense of partnership among the public and private participants in the project. However, the unorthodox management structure for the project companies can give rise to complications in regard to how such projects are treated on the government’s balance sheets, and in regard to the supervision exercised by lenders to the project. In addition, these arrangements can create transparency and governance issues, where the

public interest director faces a conflict between his/her desire to maximize the return on the government’s equity investment and the desire to minimize the liability of the government as the contractual counterparty of the project company.

For this latter reason, some private sector equity investors may be reluctant to invest alongside government-owned equity. Of course, the same degree of reluctance might not exist if the majority equity investor is an SOE—but having an SOE act as the counterparty in a PPP transaction may, in fact, reduce a project’s value for money. In a conventional PPP, the government will seek to maximize the value of the transaction by taking full advantage of the private sector’s ability to deliver the project in a more innovative and efficient manner than could be done by the public sector. Depending on the quality and nature of the SOE counterparty, such an entity may not be able to offer these benefits to the same degree as a truly private company.³⁸

Hybrid PPPs. Another alternative to the standard PPP model involves the government developing and financing projects through to the end of the construction phase (normally engaging a private sector contractor for the construction work), followed by the competitive tendering of an operations/maintenance concession. This is the essence of the “Build, Build, Build” program initiated by the Government of the Philippines in 2017,³⁹ under which initiatives such as the Subic–Clark International Airport Expansion and Modernization Project are proceeding.⁴⁰

In India, the national government has introduced a somewhat similar concept for the road transport sector, in the form of the “Toll–Operate–Transfer” (TOT) program. Under this initiative, the National Highways Authority of India (NHAI) has been authorized, since 2016, to monetize publicly funded existing toll roads, by offering 30-year operating and maintenance concessions to private sector operators.

³⁶ C.Y. Chang, and S. Chen. 2016. *An Analysis of Transitional Public–Private Partnerships Model in China: Contracting with Little Recourse to Contracts*. <https://core.ac.uk/download/pdf/79515706.pdf>.

³⁷ Footnote 26, section 2.7.

³⁸ It is noteworthy that, in the PRC PPP Center Report cited in footnote 35, the extent of private sector participation in the national PPP market is emphasized.

³⁹ Department of Finance, Government of the Philippines. 2018. Hybrid PPP Ensures Private Sector Role in Infra Buildup. <https://www.dof.gov.ph/hybrid-ppp-ensures-private-sector-role-in-infra-buildup/>.

⁴⁰ International Finance Corporation. 2019. Contracts Signed for Clark International Airport Expansion and Modernization, Pioneering Hybrid PPP. <https://ifcextapps.ifc.org/ifcext/pressroom/ifcpressroom.nsf/0/FB1179416DB120EC85258399000D6932?OpenDocument>.

One of the justifications offered for this approach is that it allows governments to take advantage of their ability to raise financing at lower rates than is the case for the private sector. The Government of the Philippines also contends that, under the program, it is possible to initiate construction within a shorter time frame than would be achievable using a standard PPP approach. In the case of India, the government asserts that the TOT program provides benefits to all road users in the country, since the funds generated from the sale of the concessions are employed by the NHAI to develop, operate, and maintain the entire national road network.

On the other hand, these hybrid models forego a key advantage of PPPs, namely the ability to obtain “whole-life” savings by integrating the design, construction, and operation phases. In addition, under these models, the design and construction activities are not subject to the discipline of close monitoring by private sector lenders and investors.

Dispute Boards. As noted in section 3 of this discussion paper, the adversarial approach used in PPP contracts for the resolution of disputes has been one of the key factors in reducing confidence in PPP transactions, both among government authorities and the private sector. This, in turn, has led to an examination of more collaborative “relational project delivery arrangements,” some of which have been briefly described in the preceding paragraphs. There is, however, another alternative approach which specifically deals with the issue of dispute resolution—namely the alternative of using “Dispute Boards.”

The Dispute Board concept had its origins, again, in the construction sector. Essentially, the concept involves having the main parties to a construction contract, namely the owner and the contractor, agree—at the outset of the contract—to appoint a standing Dispute Board (also known as a Dispute Resolution Board) to be in place for the entire length of the construction project. Typically, the Dispute Board consists of three individuals, with deep experience in the technical, financial, and legal aspects of construction projects.

In an optimal arrangement, the Dispute Board members will visit the construction site on a periodic basis (normally every three months), to familiarize themselves with the project, monitor the progress of the works, and engage with the contracting parties. Typically, the Dispute Board members will also review the project’s monthly progress reports. If a dispute arises, the members of the Dispute Board are called upon to resolve it, by way of informal and simplified proceedings. Some Dispute Board arrangements provide that the determinations made by the Dispute Board members are binding upon the contracting parties, while under other arrangements the determinations are merely recommendatory.

Dispute Boards have been used in the construction sector globally for many years, and the results have been impressive. They have been shown to reduce significantly the number of disputes which proceed to arbitration/litigation, even when the Dispute Board’s determinations are only recommendatory. Most importantly, the standing nature of Dispute Boards, and their regular engagements with the contracting parties, has meant that disputes are often avoided. This is achieved by the Dispute Board members—who are not representatives of the contracting parties—working with the parties to prevent disagreements from escalating into formal disputes. It is also achieved by the Dispute Board members being able to discuss with the parties any incipient problems which have not yet fully materialized.

For these reasons, the use of Dispute Boards on construction contracts has been endorsed by the International Federation of Consulting Engineers and by a number of multilateral development banks.⁴¹ Given the standing nature of Dispute Boards, there are costs associated with their use, but, in the context of a major project, the benefits significantly outweigh those costs—even if (and, perhaps, especially if) a formal dispute never arises between the contracting parties.⁴²

In summary, there would seem to be clear benefits in adapting the concept of Dispute Boards to PPPs—albeit with some modifications so as to take into account the complexity of PPPs and the very lengthy

⁴¹ See, for example, the discussion at pp. 15–16 of the ADB *User’s Guide to Design–Build–Operate Contracts for Water and Wastewater Greenfield Infrastructure Projects*. <https://www.adb.org/sites/default/files/design-build-operate-guide.pdf>.

⁴² As an alternative to having a standing Dispute Board, some construction contracts provide for the appointment of one or more adjudicators at the outset of the contract, for the purpose of making decisions on any future disputes, to avoid the problems associated with the appointment of adjudicators after a dispute has already materialized. This alternative is, arguably, a less costly arrangement than would be the case with a standing Dispute Board, but it does not have the same dispute avoidance capabilities.

The implementation of the reform recommendations will require a relatively high level of sophistication in government contracting authorities.

operations phase in PPP projects. The PPP laws in Argentina and Peru contemplate the use of Dispute Boards for PPPs, and Dispute Boards have been used on some PPP projects in Australia. In addition, the concept is being actively examined by, among others, the Dispute Resolution Board Foundation.⁴³

5. Suggested Reforms

Against the backdrop of the discussion of the current state of PPP transactions in the first three sections of this paper, and the summary analysis of various alternative arrangements set out in the preceding section, the following paragraphs very briefly introduce some possible reform concepts.

A Greater Focus on Risk Sharing. Without changing the fundamental nature of a PPP contract—which involves the transfer of risks from government authorities to the private sector (i.e., an arrangement inconsistent, for instance, with the principles of alliance contracting)—it should be possible to develop new approaches to the treatment of risk that place greater emphasis on risk sharing, as opposed to risk allocation. Specifically, a greater willingness to share the costs associated with unanticipated events (such as the aforementioned risk of technological obsolescence), and a more expansive approach to the definition of force majeure, could create PPP transactions with, potentially, much less friction between the parties. This need not go so far as the civil law hardship concept—instead, it could involve targeted incremental adjustments to risk allocation matrices and to the associated contractual language in PPP agreements.

Consistent Use of Dispute Boards on PPP Projects. As indicated in the preceding section of this paper, Dispute Boards have proven to be particularly effective in achieving quick and effective resolution of contractual disputes in the construction sector and, significantly, in helping the parties to those contracts avoid disputes. This dispute avoidance function could be especially useful in helping create more collaborative PPPs. The costs associated with a standing Dispute Board should not be a significant deterrent to their use, given the very high value of most PPP projects.

As indicated, some modifications will need to be made to the arrangements for Dispute Boards on construction projects—especially given the complexity and long-term nature of PPP projects—but these adjustments should be manageable.

Embracing the Principles of Partnering.

Although Project Partnering has, arguably, not been as effective as its original advocates hoped, some of the basic principles are worth reexamining—as has been done in New Zealand (see the discussion in the preceding section). PPP contracts already incorporate a number of those principles—such as having regular meetings between the contracting parties—but more could be done in this regard, so as to ensure that the public and private parties proactively manage the contract. Also, the preamble and recital clauses in PPP contracts could usefully reflect some of the language employed in Project Partnering “Charter” documents, to reinforce the sentiment that the parties to a PPP are, indeed, entering into a long-term partnership.

Building Governance Capacity. The implementation of the reform recommendations earlier discussed will require a relatively high level of sophistication in government contracting authorities. Planning, procuring, and managing PPP contracts in a more collaborative manner will be a difficult undertaking, particularly in developing and emerging market countries. Similarly, in those countries with procurement “vigilance” programs, it will be necessary to ensure that vigilance officers have a sophisticated understanding of the dynamics of more collaborative PPP transactions. In addition, a more collaborative approach to contracting will place greater demands on the fiscal authorities in government, since this will require a more refined calculation of the contingencies associated with PPP projects, so as to ensure that the increase in the government’s project risks is, at a minimum, fully offset by a decrease in the risks associated with disputes and contract termination.

Working Together. This need for high levels of governance capacity presents both a challenge and an opportunity for multilateral and bilateral development agencies. Transparency and avoidance

⁴³ Dispute Resolution Board Foundation. 2017. *Guidance on the Use of Dispute Boards in Public Private Partnership (PPP) Projects*. <http://www.drb.org/wp-content/uploads/2017/12/White-Paper-Guidance-on-the-Use-of-Dispute-Boards-in-PPP-Projects-28-April-2017.pdf>.

of corruption will remain critically important, but these objectives will have to be achieved not by the application of mechanistic rules but, instead, through a strengthening of the ability of contracting agencies to understand and apply the governance principles associated with Quality Infrastructure Investment. To accomplish this, development agencies will need to ensure that their technical assistance programs—for PPP units, finance officials, procurement authorities, and infrastructure line ministries—are closely linked. Specifically, the various departments within multilateral and bilateral development agencies which deal with infrastructure, private sector development, governance, and public procurement will need to work together, coordinating and intensifying their existing programs, to help governments in emerging and developing markets acquire the requisite skills. This will not be a quick or an easy task but cutting across the silos of the internal departments of the development agencies will be critical, if we are to develop a more collaborative approach to infrastructure investment, and restore confidence in PPPs.

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This need for high levels of governance capacity presents both a challenge and an opportunity for multilateral and bilateral development agencies.



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