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Book

Peer review and capacity building on APEC infrastructure development and investment : Indonesia

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Peer Review and Capacity Building on APEC Infrastructure Development and Investment: Indonesia

APEC Policy Support Unit

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ABBREVIATIONS

APBD	regional government budget (*anggaran pendapatan dan belanja daerah*)
APBN	central government budget (*anggaran pendapatan dan belanja negara*)
BAPPENAS	National Development Planning Agency (Badan Perencanaan Pembangunan Nasional)
BKPM	Indonesia Investment Coordinating Board (Badan Koordinasi Penanaman Modal)
BLT	build–lease–transfer
BLMT	build–lease–maintain–transfer
BOO	build–operate–own
BOOT	build–own–operate–transfer
BOT	build–operate–transfer
BOT+	build–operate–transfer plus
BTL	build–transfer–lease
BTO	build–transfer–operate
BUMN	state-owned enterprise at the central level *(badan usaha milik negara)*
BUMD	state-owned enterprise at the regional level; regional-owned enterprise *(badan usaha milik daerah)*
BPPSPAM	Support Agency for Water Supply Development (Badan Peningkatan Penyelengaraan Sistem Penyediaan Air Minum)
CIC	collective investment contract
DBFO	design–build–finance–operate
DBFOO	design–build–finance–own–operate
DBOM	design–build–operate–maintain
DIRE	real estate investment trust *(dana investasi real estate)*
DINFRA	infrastructure investment fund (*dana investasi infrastruktur*)
DPRD	Regional Legislative Assembly (Dewan Perwakilan Rakyat Daerah)
EIA	environmental impact assessment
FRBS	future revenue based securities
GCA	government contracting agency
GOI	Government of Indonesia
IIGF	Indonesia Infrastructure Guarantee Fund
IRR	internal rate of return
KPBU	cooperation between government and business entities (*kerjasama pemerintah dan badan usaha)*
LPEM FEB UI	Institute for Economic and Social Research, Faculty of Economics and Business, University of Indonesia.
PDAM	district government-owned water utility (Perusahaan Daerah Air Minum)
LKPP	National Public Procurement Agency (Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah)
LMAN	State Asset Management Agency
PDF	project development facility

PLTU	steam power plant (*pembangkit listrik tenaga uap*)
PLN	government-owned power company (Perusahaan Listrik Negara)
PINA	Non-Government Budget Investment Financing (Pembiayaan Investasi Non-Anggaran)
PJPK	government institution responsible for the PPP project (p*enanggung jawab proyek kerjasama*)
PPK	Commitment-Making Officer (Pejabat Pembuat Komitmen)
PPP	public–private partnership
PSN	National Strategic Projects (Proyek Strategis Nasional)
PSPAM	water supply development *(pengembangan sistem penyediaan air)*
RPJMN	National Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah Nasional)
SMI	PT Sarana Multi Infrastruktur
SNI	Indonesian National Standard (Standar Nasional Indonesia)
SOE	state-owned enterprise
SPAM	clean water supply system *(sistem penyediaan air minum)*
SPC	special purpose company
SPV	special purpose vehicle
RDPT	limited equity fund *(reksa dana penyertaan terbatas)*
VGF	viability gap fund
VfM	value for money
WACC	weighted average cost of capital

EXECUTIVE SUMMARY

This Peer Review supports the implementation of the Peer Review and Capacity Building on APEC Infrastructure Development and Investment with a review focused on Indonesia. The objectives of this project are as follows:

- To conduct a peer review on the current institutional set-up, policies and practices (including relevant laws, regulations and guidelines) related to infrastructure development and investment in Indonesia, specifically the toll-road and clean water sectors.
- To identify the capacity-building needs through the peer review and suggest capacity-building activities based on the identified needs.

The Peer Review provides policy recommendations on further steps to promote private sector participation in infrastructure development and investment in Indonesia.

Infrastructure Development and Investment in Indonesia

The government's strong commitment and the lack of private participation. Due to constraints on the government budget, the government of Indonesia has been showing a strong commitment towards accelerating private sector participation in infrastructure development and investment. The government, in its medium-term development plan, has estimated that investment needs for infrastructure development in the period 2020–2024 will reach USD 425 billion and it is expected that around 59 percent of the investment value will be financed by state-owned enterprises (SOEs) and the private sector. However, private sector involvement still only accounts for 21 percent of the infrastructure investment realised from 2015 to 2018. Moreover, the private entities participating in infrastructure projects are mainly SOEs.

***Private participation took place through various PPP schemes*.** The private sector has been involved in infrastructure provision through various PPP schemes. This study defines public–private partnership (PPP) broadly to include partnerships between public agencies (including SOEs) and private firms, while the government of Indonesia has a specific definition of PPP based on Presidential Regulation no. 38 of 2015. In that regulation, PPP is defined as 'cooperation between the government and business entities in infrastructure provision' or in Bahasa Indonesia *kerjasama pemerintah dan badan usaha* (KPBU). Currently, the private sector can participate in infrastructure development and investment through KPBU schemes and/or the business-to-business (B-to-B) scheme. KPBU schemes, solicited and unsolicited, may include: (1) projects with government support and/or guarantee (e.g., Umbulan clean water project) and (2) projects without government support and/or guarantee (e.g., Cipali toll road project). The B-to-B scheme refers to a partnership between a private entity and an SOE (seen mainly in the water and electricity sector) that does not enjoy any government support or guarantee. In this study, both KPBU and B-to-B are defined as PPP. Between 2015 and 2018, there were 73 KPBU projects in Indonesia, with a total value of USD 30.2 billion. This was made up of 58 solicited projects (USD 17.4 billion) and 15 unsolicited projects (USD 12.8 billion).

***The government has made major refinements in the PPP regulations*.** The regulatory framework for PPP in Indonesia has undergone major refinements. Notable improvements (mainly through Presidential Regulation no. 38 of 2015) include: (1) the inclusion of social infrastructure; (2) stronger government support through mechanisms such as the viability gap fund (VGF), project development facility (PDF) and availability payment; and (3) the government's provision of funds for land acquisition for infrastructure projects. The regulation further supports unsolicited projects through the 'right-to-match to the best bidder' incentive. Nevertheless, since the highest legal basis for PPP is government regulation, there are sometimes challenges in aligning the PPP regulations with the sectoral laws that govern the technical aspects of the projects.

***Government initiatives to overcome the financing problem*.** Currently, Indonesia depends on fiscal financing and loans for infrastructure projects because its corporate bond market is still shallow compared to its peers. To overcome the financing problem, the government established two SOEs in infrastructure project financing and advisory services: PT Sarana Multi Infrastruktur (SMI) in 2009 and Indonesia Infrastructure Finance (IIF) in 2010. These agencies act as the catalyst for financing infrastructure development. The government also launched the Non-Government Budget Investment Financing (PINA) programme in 2016 to facilitate the financial close of lucrative PPP projects particularly through equity financing. Other financing instruments, such as asset-backed securities, limited equity funds (RDPT), perpetuity notes and the infrastructure investment fund (DINFRA), have also been used by infrastructure projects.

Government support, facilities and guarantee improve the financial feasibility of PPP projects. To improve the financial feasibility of PPP infrastructure projects, the government has introduced several initiatives, such as PDF, VGF and availability payment. It also provides regulatory support in procurement and land acquisition. To mitigate government-related financial risks, the government established the Indonesia Infrastructure Guarantee Fund (IIGF) in 2009. The IIGF acts as a guarantor for the government-related risks that could lead to financial losses for the business entity, such as changes in regulations (e.g., tariff revisions) and in political stability.

Indonesia is progressive on PPP compared to its peers in the region. Indonesia ranks third after Viet Nam and China in the number of PPP projects, and second in the value of PPP projects. A notable progressive action on the part of Indonesia is in land acquisition financing, where it established the State Asset Management Agency (LMAN) and mandated the agency to provide land funds for infrastructure construction in the National Strategic Projects (PSN) scheme. Indonesia has also increasingly improved its risk-sharing arrangements to match those provided by others in the region.

Toll Road Development

***Toll road development is lagging behind, opening more opportunities for PPP*.** As of July 2019, total toll road length in Indonesia is only approximately 1,600 kilometres, while the proportion of toll road length to total area stands at only 0.08 percent. Infrastructure development is particularly needed in provinces with low toll-road coverage to improve accessibility and connectivity. Thus, the toll road industry is expected to still be an attractive investment in the coming years.

Improved governance may further support PPP implementation. A new governance arrangement for the toll road sector was introduced with the implementation of Law no. 38 of 2004 regarding roads. This law separates the role of regulator and operator in road projects. Two government agencies are in charge of toll road development: Bina Marga, which initiates and designs the toll road projects, and the Indonesia Toll Road Authority (BPJT), which acts as the regulator and is responsible for executing the bidding process and becoming the government contracting authority (GCA) for PPP projects. This governance arrangement has helped to lessen the complexity of the bureaucracy in toll road projects that could lead to regulatory disputes between the stakeholders in central-level and regency-level road development.

Private participation is high, but mostly involves SOEs. Various PPP schemes have been used in toll road projects. The solicited PPP scheme remains the most frequently used, while unsolicited projects have yet to be seen. The direct assignment method has only been carried out on two projects. Unlike water projects that have used VGF and PDF, toll road projects under PPP agreements have been facilitated only by financing guarantees from the IIGF; this is because toll road projects still enjoy high financial feasibility with enough potential benefits for the operators.

Clean Water Development

High demand for PPP clean water projects. Given the high rate of population growth in Indonesia, demand for clean water is projected to increase to 11.15 billion cubic metres in 2035. Two forms of private participation are seen in the water sector: KPBU and B-to-B. In the B-to-B scheme, private entities cooperate with the District Government Owned Water Utility (PDAM). The B-to-B scheme is the most common partnership contract in the clean water provision sector.

PPP in the water sector is more challenging as it deals with regional governments. PPP is chosen if a project is considered to be complex, requires a large investment and is not financially viable – and hence in need of government support. However, since PPP in the water sector deals with PDAM in the case of a district-level project or its regional counterpart (PDAB) in the case of a project at the regional or provincial level, local legislative bodies are involved in approving the projects. If the legislative bodies are not brought into the process right from the preparation stage, approval of a project may take a long time.

Government support and additional schemes are available for PPP in the water sector. Most KPBU clean water projects receive government support (VGF and PDF) in addition to government guarantees. Two PPP schemes have been used in the sector: build–operate–transfer (BOT) and BOT plus. BOT ties the private firm to an agreement to act as an operator in the production of bulk water and/or includes installation of the water treatment plant. The BOT plus scheme includes an additional type of agreement for the PPP to build the transmission pipelines for distribution, but the firm's role is limited to construction and does not extend to distribution.

Quality of Infrastructure Standards in PPP Regulation and Implementation

Strong alignment with existing rules, but with room for improvement. PPP regulations in Indonesia have clearly set that in identifying and selecting projects, a project should comply with the central and local medium-term development plan and align with the fiscal capability of the

central government or regional government. However, there is room for improvement, especially with regard to the misalignment between VGF criteria and the initiative on implementing the best value method and the two-stage bidding process. To date, a project's winning bid is determined only by a detailed service requirement or output specification, and a minimum price or minimum government support (VGF). This suggests urgency on incorporating the value for money (VfM) measurement to determine a project's life cycle cost.

***Safety is not yet enforced and supervised well*.** The regulations on PPP do not clearly and comprehensively describe the need to consider safety and resilience issues beyond the requirement that the preparation stage must consider risk management when preparing the outline business case. There is a need for enforcement of safety rules and better supervision of operation and maintenance by the GCA.

***GCAs lack expertise in VfM principles*.** While there is a regulation stipulating that PPP projects should be selected based on VfM principles, the GCA often lacks knowledge and skill in employing public sector comparator (PSC) and VfM analyses, which suggests the urgency of capacity building in this area.

***Environmental impact assessment and disaster risk management need to be improved*.** The relevant PPP regulation requires that the pre-feasibility study and the preparation of the outline business case include environmental and social assessments. Nevertheless, to achieve better quality standards, improvements in environmental impact assessments and disaster risk management are needed, and there should also be a clear plan for *force majeure* mitigation.

***Consideration of local resources and ownership and responsibility needs to be improved*.** Consideration of local resources and ownership and responsibility is not clearly stated in the existing PPP regulations. There is a need to recognise that in project planning, there should be more balance between local and private-sector involvement and ownership. Social impacts also need to be assessed and addressed.

Institutional environment to support further private participation should be developed. The current PPP regulations focus more on the early stage of a partnership: the preparation and transaction of PPP projects. The PPP regulations tend to overlook issues that might arise during contract implementation or project completion. For example, a dispute resolution mechanism is not stipulated and explored in the PPP regulations. In addition, private investors are sometimes subject to excessive regional government regulations, permits and retribution, which impede efforts to accelerate the development of an infrastructure project. To anticipate such issues, there is a need for more coordination with regional governments starting from the preparation stage of PPP projects.

***Six major issues to be considered to increase private participation*.** To create more incentives for private participation in infrastructure development and investment in Indonesia, six major issues need to be addressed: (1) lack of PPP awareness in the government (in the executive and legislative branches, and among law enforcement officers); (2) the proclivity of the government to change regulations that affect PPP agreements; (3) delays in land acquisition due to land disputes and incomplete land documents; (4) public distrust over private sector involvement in operating and

managing public services, especially in the water sector; (5) the partiality shown by local banks toward SOEs by offering a preferential interest rate; and (6) the lack of interest among foreign investors in greenfield PPPs that require expensive funding, and carry connectivity and land acquisition risks.

Main challenges to PPP implementation. Challenges include: difficulties associated with the need to seek approval for a PPP project at the provincial/district level due to the decentralisation policy in Indonesia; inefficiencies in the reimbursement process for land acquired for PPP projects; unfair risk sharing when there is a delay in land acquisition reimbursement, with the private sector bearing the risk; and the use of minimum price (after satisfying the output specification) in procurement rather than the best value method, due to the GCA lacking an understanding of PSC or VfM.

Recommendations

In summary, our study reveals five common topics of concern. The five topics are: (1) bureaucracy and regulation; (2) government support and facilities; (3) land acquisition; (4) the PPP contract; and (5) risk mitigation. These five most-mentioned topics are discussed in this report with attention to the main issues and achievements. To further accelerate PPP implementation in Indonesia, we suggest short-run and long-run recommendations for every issue discussed (Table 6.1.).

The need to improve efficiency in bureaucracy and regulation. The lack of PPP awareness in the government needs to be improved by promoting capacity building, in particular on the concept of VfM. In addition, the complex bureaucracy due to decentralisation in water projects could be lessened by addressing inefficiencies in the institutional processes related to infrastructure project development.

Further acceleration in government support and facilities. The improvement in the level of support and facilities from the government since the enactment of Presidential Regulation no. 38 of 2015 (such as the introduction of VGF and PDF) needs to be appreciated. To further increase infrastructure development, the government could enhance the implementation of hybrid or blended financing. In the long run, more government guarantees are needed to increase investors' appetite for Indonesia's PSN.

More efficient land acquisition process. Besides establishing LMAN to provide land acquisition funds for PSN projects, there is a need to address the administrative issues that have led to delays in reimbursing private investors for land acquired by them. The government should develop an integrated online system for land acquisition as well as strengthen the role of the Commitment-Making Officer (PPK) in providing better administration service.

The need to strengthen the PPP contract. Unpredictable risks due to political and regulatory changes, such as the recent mandatory revisions to the tariff structure of the Trans Java toll road, have increased the vulnerability of the PPP contract. Several issues need to be considered in developing a PPP contract or agreement that would encourage higher private participation in PPP: (1) the vulnerability of the contract to political changes; (2) the need to incentivise private entities

by allowing them to internalise any gains made through their own efficiency efforts after a contract is signed; (3) the enforcement of the contract.

Improvement in risk mitigation strategy. High potential uncertainty during project implementation needs to be addressed by re-evaluating the current risk mitigation strategy. The government also needs to implement relational contracts that allow internal or non-court renegotiation when unforeseen risks happen.

Proposed Capacity-building Areas

Capacity building on VfM. PPP project proposals rarely involve a consideration of the broader social costs and benefits. This is reflected typically in bids and PSC that focus exclusively on the direct output specification and costs of a project. GCAs should be able to incorporate specifications related to quality and technology in the evaluation of PPP infrastructure design proposals. Also, creating an explicit VfM method should be worth prioritising in the near term. Making these improvements would require technical capacity building in the development of quality infrastructure with an underlying focus on VfM and life cycle cost, notably to build a common understanding and awareness regarding VfM and PSC. Although the two-stage bidding process is newly implemented, Indonesia could completely reform its bid evaluation process by moving from minimum price to the best value method. In sum, future capacity building should address how to go beyond minimum standards and toward higher quality in order to achieve optimal life cycle cost.

Capacity building for GCAs regarding PPP, especially for regional governments. The GCA is a key stakeholder in infrastructure development, with responsibility for preparing the pre-feasibility study for a PPP project, and for monitoring the construction of a PPP project and its operation right up to point of termination. However, the GCA and the regional government typically lack the comprehensive knowledge of the PPP mechanism that is needed to more effectively manage the process. This highlights the importance of capacity building and assistance in project preparation and design. Toward this end, a PPP node (*simpul* KPBU) is needed, particularly in the municipal government, to oversee and coordinate strategic regional government initiatives. In addition, the PPP Joint Office should provide training facilities for capacity building. Also, there is a need for more institutions in charge of PDF to help the GCAs increase their effectiveness in the preparation and implementation of PPP project transactions (currently, SMI, IIGF and Danareksa are the only responsible agencies involved).

1. INTRODUCTION

1.1 BACKGROUND

This Peer Review supports the implementation of the Asia-Pacific Economic Cooperation (APEC) Committee on Trade and Investment (CTI)'s project titled Peer Review and Capacity Building on APEC Infrastructure Development and Investment in Indonesia. The project is a mechanism to support APEC economies in promoting the concept of 'quality of infrastructure' as stipulated in the APEC Leaders' Declaration of 2013 and the 'physical connectivity' agenda items as stipulated in the APEC Connectivity Blueprint 2015–2025 in conducting infrastructure development and investment. Quality of infrastructure refers to the critical aspects of infrastructure services, while the physical connectivity agenda includes enhancing infrastructure financing through public–private partnerships (PPP) and other means; adopting comprehensive assessment methods that consider key quality elements in the evaluation of infrastructure project proposals; and applying good practices and people-centred investment for planning and implementing infrastructure projects.

Indonesia is the third economy reviewed, with Japan as the facilitating economy. During the Peer Review, the Indonesia Investment Coordinating Board (BKPM) is the contact institution and the APEC Policy Support Unit (PSU) serves as the *ad hoc* review team secretariat.

1.2 OBJECTIVES

The objectives of the Peer Review and Capacity Building on APEC Infrastructure Development and Investment in Indonesia are:

- To conduct a peer review on the current institutional set-up, policies and practices (including relevant laws, regulations and guidelines) related to infrastructure development and investment in Indonesia, specifically on the toll-road and clean water infrastructures.
- To identify capacity-building needs through the peer review and suggest capacity-building activities based on the identified needs.

Based on the review, Indonesia is benchmarked against a peer group made up of the Association of Southeast Asian Nations (ASEAN) economies to identify its position and performance in the region. The Peer Review will provide policy recommendations on further steps for promoting private participation in infrastructure development and investment in Indonesia through various PPP schemes.

1.3 SCOPE

The Peer Review covers aspects related to the institutional environment, policies and implementation of PPPs in infrastructure projects in general, with specific attention to toll road and clean water projects.

The scope includes: (1) review of the infrastructure needs gap in Indonesia; (2) review of policies, including relevant laws, regulations and guidelines, regarding infrastructure development in Indonesia; (3) operation and implementation of policies regarding infrastructure development in Indonesia, especially PPP projects; (4) review of toll road development in Indonesia; (5) review of clean water development in Indonesia; (6) institutional set-up for PPP in infrastructure; (7) benchmarking of Indonesia's performance in promoting PPP in infrastructure projects; and (8) challenges in achieving satisfactory infrastructure standards in Indonesia.

1.4 APPROACHES

Based on the 2018 APEC Guidebook on Quality of Infrastructure Development and Investment, the Peer Review is conducted using two approaches:

- **Quality of infrastructure approach**

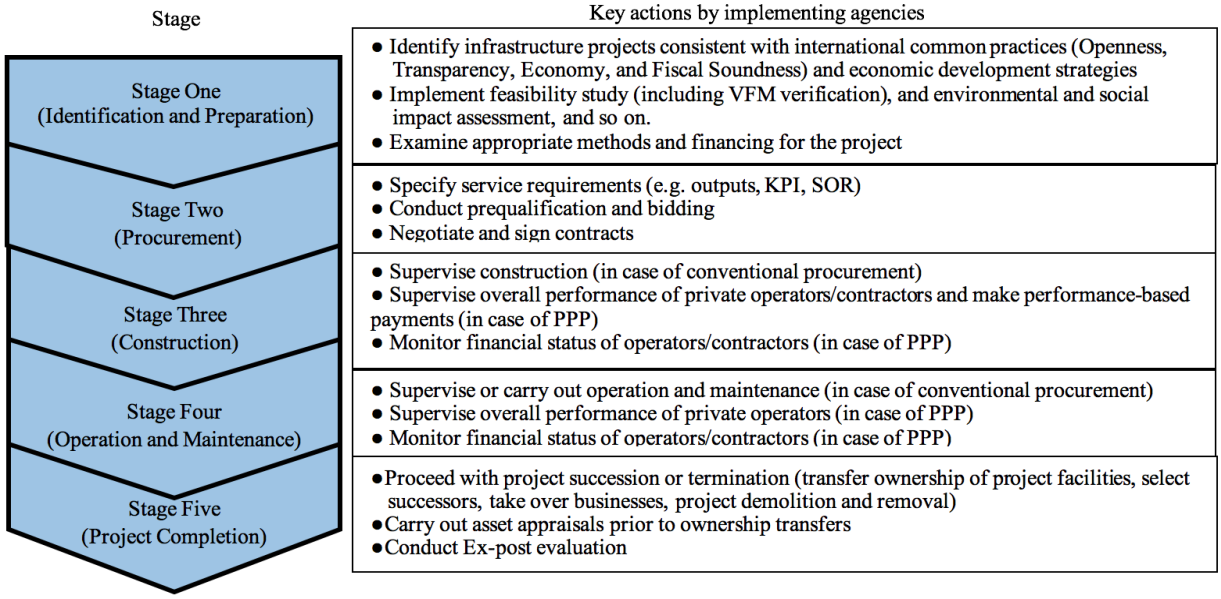
This involves a review of whether the five aspects of 'quality of infrastructure' have been considered and secured in infrastructure development and investment. Those aspects are:

- Alignment with development strategy and the principles of openness, transparency, economic efficiency and fiscal soundness
- Integration of standards on disaster-proofing, welfare for the neighbourhood and region, as well as resilience to natural disaster, into the design and construction of the projects
- Consideration of economic and financial soundness in terms of value for money (VfM) and life cycle cost reduction in PPP projects
- Consideration of social and environmental sustainability
- Consideration of local resources, condition, ownership and responsibility.

- **The infrastructure project cycle approach**

This involves reviewing whether 'key actions' to ensure 'quality of infrastructure' have been considered and secured throughout the five stages of project implementation. Figure 1.1 shows the key actions needed at every stage.

Figure 1.1. Infrastructure project stages and key actions by implementing agencies



KPI= key performance indicator; PPP=public–private partnership; SOR= scope of requirements; VFM=value for money
Source: APEC, *APEC Guidebook on Quality of Infrastructure Development and Investment (Revision)* (Singapore: APEC, 2018).

1.5 METHODOLOGY

This research uses a qualitative approach, encompassing literature review, in-depth interviews, and focus group discussion.

- **Literature review**

  An extensive literature review was conducted using various sources, including government documents and data, infrastructure project reports, academic reports and articles, online materials, and books. The aim was to (1) provide a preliminary answer to the questions within the Review Criteria regarding existing infrastructure policies; (2) develop the interview guidelines for evaluating the implementation of infrastructure projects, especially the PPP projects in the toll-road and clean water sectors, and for assessing the institutional set-up for PPP in infrastructure; and (3) conduct a comparative study on regional infrastructure investment, private-sector finance, and PPP transactions between Indonesia and other ASEAN economies.

- **In-depth interviews with stakeholders**

  Individual and group in-depth interviews were conducted with various stakeholders of infrastructure projects, including those related to the toll-road and clean water projects, to assess and evaluate the implementation of infrastructure projects, especially the PPP projects in the toll-road and clean water sectors. The interviews also focused on identifying the gaps between existing conditions and the ideal set-up that will support the Quality of

Infrastructure Development and Investment and the physical connectivity agenda in Indonesia. In total, the Peer Review covered as many as 22 informants (see the list in Annex A).

- **Focus group discussions**

  Focus group discussions were conducted with selected groups to discuss the infrastructure projects, covering PPP in general and also specifically the toll-road and clean water sectors.

  - *Focus group discussion on PPP*: This focused on discussing the policies, practices and challenges of PPP projects. A focus group on PPP conducted in Jakarta in March 2019 included 11 participants (see list in Annex A).
  - *Focus group discussion on the toll road sector*: The focus was on discussing the analysis, evaluation and main findings of the review on the toll road sector. A focus group on toll road projects conducted in Jakarta in July 2019 included 10 participants (see list in Annex A).
  - *Focus group discussions on the clean water sector*: These discussed the analysis, evaluation and main findings of the review on the clean water sector. Focus group discussions were conducted in three cities – Surabaya, Semarang and Lampung – with approximately 6–8 participants in each city.

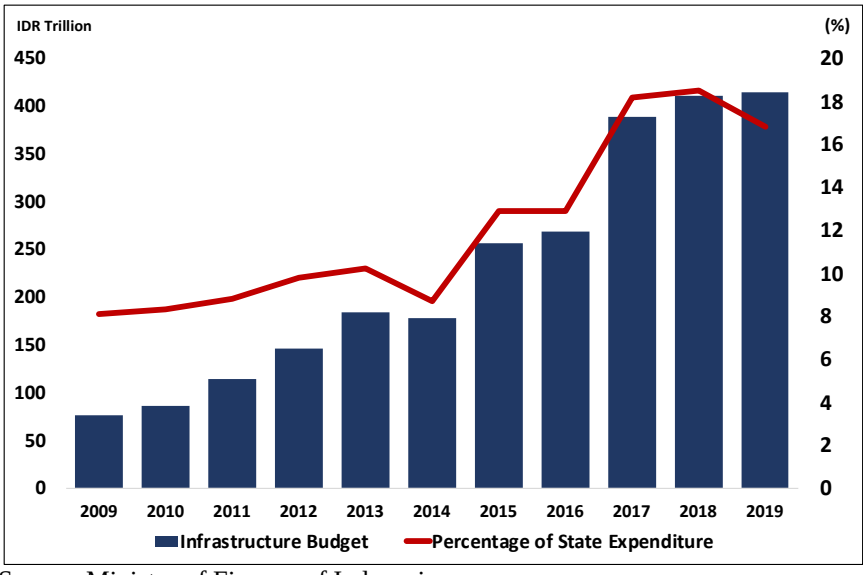
2. OVERVIEW ON INFRASTRUCTURE DEVELOPMENT AND FINANCING MECHANISMS RELATED TO PPP IN INDONESIA

This chapter provides an overview of the infrastructure development and financing mechanism in Indonesia, specifically on the state of PPP implementation: legal structure and governance, project implementation, available funding mechanism, risk management strategy, supporting institutional environment, and benchmarking against peers in the region.

2.1 INTRODUCTION

The government of Indonesia has been showing a strong commitment toward accelerating private sector participation in infrastructure development and investment. With the massive infrastructure needs associated with economic growth, relying on the government budget as the sole funding source no longer seems possible. Figure 2.1 illustrates that since 2009 Indonesia's infrastructure spending has increased markedly, from IDR 76.3 trillion in 2009 to IDR 415 trillion in 2019. The economy's National Medium-Term Development Plan (RPJMN) estimated that investment needs for infrastructure development in 2015–2019 reached IDR 4,796.2 trillion (around USD 359.2 billion); in the period 2020–2024, this will reach IDR 5,957.7 trillion (USD 425 billion). The government expects that around 59 percent of the investment value would be delivered through state-owned enterprises (SOEs) and the private sector. However, private sector involvement in infrastructure investment from 2015 to 2018 was still lower than the target, reaching only 21 percent (Figure 2.2). Given the funding limitations, private sector participation through the PPP scheme is pivotal in the provision of infrastructure in Indonesia.

Figure 2.1. Infrastructure budget allocation, 2009–2019



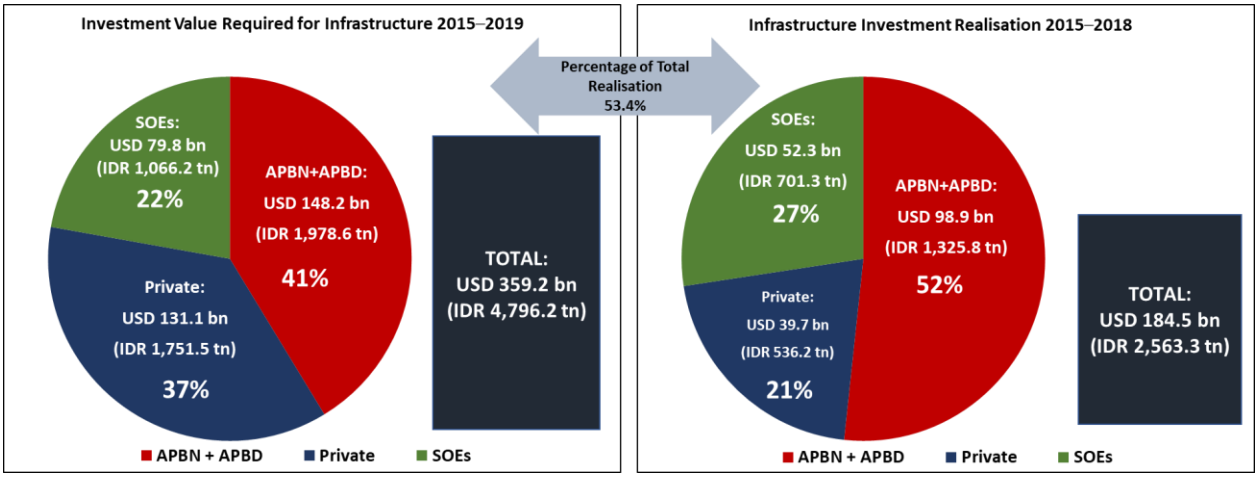
Source: Ministry of Finance of Indonesia.

Private participation in infrastructure development and investment is encouraged through various PPP schemes. This study defines a public–private partnership (PPP) broadly as a partnership between public agencies (including SOEs) and private firms, while the government of Indonesia

has a specific definition of PPP based on Presidential Regulation no. 38/2015. Based on the regulation, PPP is defined as 'cooperation between the government and business entities in infrastructure provision', or in Bahasa Indonesia, *kerjasama pemerintah dan badan usaha* (KPBU). Business entities include private firms, SOEs and cooperatives. Under this regulation, an SOE can also act as a government contracting agency (GCA). Currently, the private sector can participate in infrastructure development and investment in Indonesia through KPBU schemes and/or the business-to-business (B-to-B) scheme, which are all defined as PPP in this study. The schemes include:

- *KPBU with government support and/or guarantee*: a partnership between a private entity and the government of Indonesia that receives government support and/or guarantees, such as the Umbulan clean water projects
- *KPBU without government support and/or guarantee*: a partnership between a private entity and the government of Indonesia that receives no government support and/or guarantees, such as the Cipali toll road project
- *Business-to-business (B-to-B)*: a partnership between a private entity and an SOE that does not receive any government support or guarantee.

Figure 2.2. Infrastructure financing framework, 2015–2019



APBD=regional government budget; APBN=central government budget; SOE=state-owned enterprise
Source: Ministry of National Development Planning/BAPPENAS presentation during a focus group discussion for Peer Review and Capacity Building on APEC Infrastructure Development and Investment, 2 April 2019.

To date, the private entities that participate in infrastructure projects are mainly SOEs. The lack of participation by private firms, especially foreign investors, is a major challenge for PPP implementation in Indonesia. To overcome this, the government has conducted major regulatory reform and established new agencies to support PPP implementation over the past decade. Presidential Regulation no. 67 of 2005 concerning cooperation between government and business entities in the provision of infrastructure marked a milestone for PPP regulation. Subsequently, new institutions were established during 2009–2010 to provide an infrastructure guarantee fund (Indonesia Infrastructure Guarantee Fund, or IIGF) and infrastructure project financing (PT Sarana Multi Infrastruktur, or SMI; and Indonesia Infrastructure Finance, or IIF).

Beginning in 2014, under the Working Cabinet led by President Joko Widodo, private participation in infrastructure development received more support to help bridge the infrastructure gap in Indonesia. Infrastructure development is the main focus of the RPJMN 2015–2019; and based on Presidential Regulation no. 58 of 2017 on the amendment to Presidential Regulation no. 3 of 2016 on the acceleration of PSN implementation, it was decided that PSN should include 223 projects and also three programmes, in the electricity industry, the airplane industry and on economic equality. The 223 projects and three programmes will require around IDR 4,150 trillion, with funding coming from the government budget amounting to IDR 428 trillion, SOEs (both at the central level (BUMN) and the regional level (BUMD)) amounting to IDR 1,273 trillion, and the private sector amounting to IDR 2,449 trillion.

Further, the government recognised that there were insufficient incentives for the private sector, which was indicated by very few PPP agreements being signed; and it amended the PPP regulation with Presidential Regulation no. 38 of 2015 to offer more incentives for private participation, especially in terms of government support schemes. Moreover, realising that land acquisition for infrastructure projects is one of the main obstacles to PPP implementation, the government further mandated the State Asset Management Agency (LMAN) to fund land acquisition for infrastructure projects listed as PSN.

2.2 LEGAL FRAMEWORK AND GOVERNANCE FOR PPP

PPP is a legal concept in the Indonesian legal framework. The main regulation for PPP is Presidential Regulation no. 38 of 2015 regarding cooperation between the government and business entities (KPBU) in the provision of infrastructure. Table 2.1 shows the existing regulatory framework for PPP in Indonesia.

Unfortunately, since the highest legal document for PPP is government regulation, there is a challenge in aligning PPP regulations with the sectoral laws passed by the principal legislative body, i.e. the House of Representatives, such as Law no. 38 of 2004 regarding roads. Following the introduction of PPP regulations, the PPP concept has only been included in ministerial guidelines, the central-level procurement regulation, the regulation of availability payment and regulations regarding government guarantees and government support. Potential mismatch between PPP regulations and the sectoral laws governing the technical aspects of a project is a concern, even though the likelihood of this happening is small.

Aside from the regulatory framework, planning and implementation of PPP projects are governed by several key public agencies, supporting institutions and private firms as listed in Table 2.2.

The PPP regulatory framework in Indonesia has undergone major refinement since it was first established in 1990. The current regulatory framework offers three major improvements over the previous one, namely, the inclusion of social infrastructure; the provision of stronger government support through mechanisms such as the viability gap fund (VGF), the provision of project development fund (PDF) and availability payment mechanism; and most importantly, funding by

the government for acquiring land for infrastructure projects.[1] Table 2.3 sheds light on the fundamental regulatory improvements.

Table 2.1. PPP regulatory framework in Indonesia

Topic	Regulations
General Regulations on PPP	• Presidential Regulation no. 38/2015 regarding cooperation between the government and business entity on infrastructure provision • Ministry of National Development Planning/Head of National Development Planning Agency Regulation no. 4/2015 regarding operational guideline for PPP in infrastructure provision • Head of National Public Procurement Agency (LKPP) Regulation no. 19/2015 regarding guideline for procurement of business entity for PPP in infrastructure provision • LKPP Regulation no. 29/2018 regarding guideline for procurement of business entity on solicited PPP infrastructure project.
Procedures for Providing Government Support/Guarantee	**Government Support** • Ministry of Finance Regulation no. 170/2018 regarding amendment to Ministry of Finance Regulation no. 223/2012 regarding viability gap funding • Ministry of Finance Regulation no. 170/2015 regarding feasibility support for some construction costs • Ministry of Finance Regulation no. 73/2018 regarding project development facility **Government Guarantee** • Presidential Regulation no. 78/2010 regarding government guarantee for PPP infrastructure project • Ministry of Finance regulation no. 260/2010 as having been amended by Ministry of Finance Regulation no. 8/2016 regarding guideline on the government guarantee **Regulation of Availability Payment** • Ministry of Finance Regulation no. 260/2016 as an amendment of Ministry of Finance Regulation no. 190/2015 regarding availability payment on PPP in infrastructure provision • Ministry of Home Affairs Regulation no. 96/2016 regarding availability payment sourced from the regional budget (APBD) for PPP in infrastructure provision.
Regulations on Non-Government Budget Investment Financing (PINA)	• Presidential Regulation no. 20/2016 on the amendment of Presidential Regulation no. 66/2015 on the National Development Planning Agency

Source: National Development Planning Agency, Indonesia (BAPPENAS), *PPP Book 2019* (Jakarta: Ministry of National Development Planning, 2019).

[1] The highlights of the principal regulations of PPP are provided in Annex D, which includes the definitions of VGF, PDF and availability payment.

Table 2.2. Principal public agencies, institutions and firms that support PPP in Indonesia

	Key Agencies	Function
Government Agencies	Directorate of Public–Private Partnership (PPP) and Design – Ministry of National Development Planning/BAPPENAS	Provide assistance in completing initial preparation documents.
	Committee for Accelerating the Provision of Infrastructure (KPPIP)	The champion agency to facilitate coordination in debottlenecking efforts for National Strategic Projects (PSN) and priority projects.
	Ministry of Finance (MoF)	Provide government support budget and provide assistance in completing final preparation documents.
	Government Contracting Agency (GCA)	Prepare and/or evaluate PPP project. Select and sign Cooperation Agreement, and issue PPP project licence to business entity.
	Indonesia Investment Coordinating Board (BKPM)	Ensure the credibility of the investor and assist GCA in conducting market sounding.
	PPP Joint Office	Coordinate, facilitate and provide capacity building for government agencies, the GCA and private entities to accelerate PPP project implementation.
	National Public Procurement Agency (LKPP)	Act to ensure transaction probity and fair tendering for PPP projects.
	Coordinating Ministry for Economic Affairs	Support the debottlenecking process in a PPP project.
	Ministry of Home Affairs (MOHA)	Evaluate project value and regional fiscal capacity for PPP projects that use availability payment.
	PINA (Non-Government Budget Investment Financing) Unit – BAPPENAS	Assist private entities to find alternative non-government financing mechanism to accelerate the financial close.
Supporting Institutions (SOE)	PT Sarana Multi Infrastruktur (SMI)	Provide infrastructure financing and advisory service for PPP projects.
	Indonesia Infrastructure Finance (IIF)	Provide capital for infrastructure and advisory service for PPP projects.
	Indonesia Infrastructure Guarantee Fund (IIGF)	Provide contingency support and guarantees against government-related risks to private entities
	State Asset Management Agency (LMAN)	Provide land acquisition fund for PPP projects listed as PSN.
Private firms	Special purpose vehicle (SPV)	The Indonesian legal entity owned by the project sponsors, which enters into a Cooperation Agreement with a GCA, or receives a direct appointment from the government, to provide a particular service or infrastructure on a PPP basis.

Source: National Development Planning Agency, Indonesia (BAPPENAS), *PPP Book 2018* (Jakarta: Ministry of National Development Planning, 2018).

Table 2.3. Major improvements in PPP regulatory framework

Aspects	Previous Regulation (from Presidential Regulation no. 67 of 2005)	Current Regulation (from Presidential Regulation no. 38 of 2015)
Definition of Public–Private Partnership (PPP)	'a written agreement between the private sector and government entity to increase the development of infrastructure'	'cooperation between the government and private sector to increase the development of infrastructure for both projects and social services, in which most or all of the resources are furnished by the private sector and **the risk management will be allocated to both parties**'
Type of PPP Project	Physical infrastructure in 8 sectors: transportation, road, irrigation, drinking water, wastewater, telecommunications and informatics, electricity, and natural oil and gas infrastructure	- Physical infrastructure in 8 sectors with additional 5 sectors: water resources, waste management, renewable energy, energy conservation, city facilities - Social and economic infrastructure in 7 sectors: education facilities, sports and arts facilities, industrial estate, tourism, health, prison, and community housing
Method of Appointment	- Tender - Direct appointment (if only 1 participant is pre-qualified)	- Tender - Direct appointment (limited to certain circumstances such as technology and proximity requirements)
Payment Mechanism for Return of Investment	User fee regulated by tariff	- User fee regulated by tariff - Availability payment - Any other form that does not contravene any prevailing laws and regulations
Government Support	- Tax incentives	- Tax incentives support - Viability gap fund (VGF) - Project development facility (PDF) - Other forms in accordance with applicable regulations such as direct lending
Government Guarantee	Not stipulated	Government guarantee provided by the Indonesia Infrastructure Guarantee Fund (IIGF)
Partial Funding	Not stipulated	The government contracting agency (GCA) can finance some parts of the construction that support the PPP facility
Unsolicited Project	- Receive a compensation (max. 10% of additional value) in bidding process - Indemnification of fore-cost paid out by the initiator	- Receive a compensation of 10% additional score in the bidding process - Have right-to-match to the best bidder - Indemnification of fore-cost paid out by the initiator
Land Acquisition	Not stipulated	Funded by the government budget or regional government budget (only for central-level strategic projects, or PSN) through the GCA based on reimbursement mechanism
Success Fee Mechanism	Not stipulated	Project preparation costs could be imposed on the winning bidder (feasibility study, transaction process and success fee).
Transaction Process	The procurement of the business entities in the context of a Cooperation Agreement is conducted through public auction (tender)	The procurement of the business entities could be done through a tendering process or by direct appointment.
Financial Close	12 months with another 12 months extension.	12 months with another 6 months extension.
Return of Investment	User fee	- User fee - Availability payment
PPP node (*simpul* PPP) in the GCA	Does not exist	PPP node prepares policy and conducts synchronisation, coordination, supervision and evaluation of PPP development.

Source: Presidential Regulations regarding PPP.

Presidential Regulation no. 38 of 2015 describes three main stages of PPP implementation: (1) planning stage, which includes project identification and preliminary study; (2) preparation stage, which includes preparation of the outline business case and final business case; and (3) transaction stage, which includes tendering preparation, pre-qualification, request for proposal, bid award, PPP agreement signing, and financial close.

PPP regulation in Indonesia focuses on the procedures of PPP implementation from the planning stage to the transaction stage where the PPP contract is signed by the government contracting agency (GCA) and the implementing business entity. The regulation stipulates that infrastructure construction, operation, and project completion are to be included in the PPP agreement. As a result, important issues such as the rights and obligations of concessionaires, inspection and oversight requirements, and procedures for resolving conflicts are not regulated yet.

The PPP regulation states that infrastructure provision may be initiated by a business entity (i.e. unsolicited projects) if three major requirements are met: (1) technically the proposal is integrated with the master plan of the sector concerned; (2) the project is economically and financially feasible; and (3) the business entity that proposes the initiative has adequate financial capability to finance the development of the infrastructure. For such unsolicited projects, value for money (VfM) evaluation and competitive bidding processes are carried out to achieve the highest value from the projects. Three major incentives for the private entities to participate in unsolicited projects are the additional mark of 10 percent on the procurement score, the right to make an offer to the best bidder (the right to match) according to the results of the assessment in the tender process, and that the GCA can purchase the PPP initiative. Basically, unsolicited projects may offer the advantage of flexible and innovative design and may be less of a financial burden to the government.[2] The government is thus attempting to secure efficiency and fiscal soundness from unsolicited projects in PPPs.

[2] J. Kim and S. Wi, 'Delivering Economic Benefits from Public–Private Partnerships: The Experience of the Republic of Korea', in *Realizing the Potential of Public–Private Partnerships to Advance Asia's Infrastructure Development*, ed. A. Deep, J. Kim and M. Lee (Manila: Asian Development Bank, 2019), 191–214.

Box 2.1. Achieving better value-for-money: A snapshot of VfM and PSC in Indonesia

When PPP projects can deliver better value for money (VfM) than traditional procurement or direct government provision, PPP should be chosen. Public sector comparator (PSC) is a method to measure whether PPP can generate VfM compared to conventional provision. VfM refers to the best possible outcome available through a comparative analysis of all the benefits, costs and risks over the entire lifetime of the procurement. VfM involves the process of developing and comparing costs between a PPP project, traditional project delivery and the bid price of the private sector, which relies on the discount rate and value of risk transfer.[a] Based on the above definitions, VfM is not necessarily the lowest price alternative, but rather an awareness of the overall potential benefits to the government and the private sector and the appropriateness of the distribution of risks between them.

In Indonesia, VfM is analysed based on a quantitative measurement by using the PSC method plus an additional qualitative assessment. Qualitative VfM is examined in the proposed preliminary study, while quantitative VfM is calculated at the time of the initial pre-feasibility study (in the outline business case).

Qualitative VfM

The qualitative VfM of a project includes checking against several criteria under conventional procurement and PPP as shown in Table 2.4. These criteria includes whether a project could receive benefit from private sector innovation, could achieve appropriate risk transfer and could receive sufficient stakeholder support.[b]

Table 2.4. Qualitative VfM analysis: Conventional vs. PPP

Determinants of Value	Conventional Procurement	PPP	Explanation
Service standard	✓	✓✓	Payments to business entity based on rates or milestone achievements and/or performance on the AP mechanism.
Effective design and construction	✓	✓✓	The government focuses on the desired output; business entities compete using the best know-how to reach the lowest prices.
Flexibility to changes in specification	✓✓	✓	Changes in specifications in PPP transactions are more difficult to accommodate.
Ability to raise funds	✓	✓✓	Business entities have the ability to access capital markets more flexibly.
Overall project completion time	✓	✓✓	Completion of the project by business entity generally on time to avoid losses due to delays.
Calculation of life cycle products to reduce costs	×	✓✓	The business entity optimises construction, maintenance and operation costs for the entire period of the cooperation period.
Risk allocation	✓	✓✓	Risk is borne by the entity that is most efficient and able to manage it.

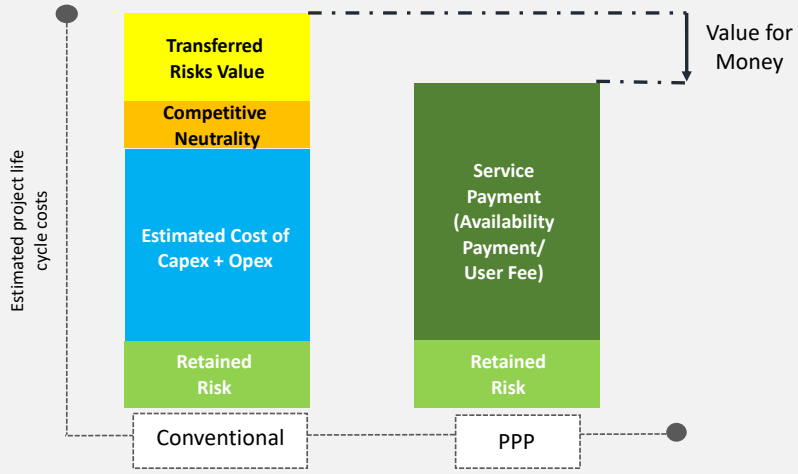
x='is not included'; √='there is incentive'; √ √='there is more incentive'.
AP=availability payment; PPP=public–private partnership
Source: National Development Planning Agency of Indonesia (BAPPENAS).

Quantitative VfM: PSC

PSC is one of the most popular methods for evaluating VfM in PPP projects, having been adopted by economies such as Australia, Canada, Hong Kong, China, Japan, and the United Kingdom. PSC is a quantitative cost estimation if the project is carried out by the government and consists of four aspects: (1) estimated cost of capital expenditure and operating expense; (2) retained risk (the value of those risks that remain in the public sector); (3) competitive neutrality (adjustment for taxation); and (4) transferable risk

(value of risk transferable to the private sector).[c] Figure 2.3 illustrates a PSC in Indonesia which compares a conventional project to a PPP project scheme.

Figure 2.3. Quantitative VfM analysis: Conventional procurement vs. PPP



Capex=capital expenditure; Opex=operating expense; VfM=value for money
Note:
* The cost of the PPP is calculated based on the present value of the service payment or revenue stream to the business entity during the cooperation period.
** VfM is calculated based on the difference between hypothetical costs of conventional methods and service payment as shown above.
Source: National Development Planning Agency of Indonesia (BAPPENAS).

However, there are several limitations in implementing PSC in Indonesia. First is the impossibility of accurately calculating the VfM and PSC of a project. Second, subjectivity in carrying out VfM analysis is unavoidable. Third, GCAs still lack the capacity to conduct PSC (or calculate VfM). Therefore, capacity building for GCAs is needed to increase the implementation of PSC calculations.

Note:
[a] S. Murray, *Value for Money? Cautionary Lessons about P3s from British Columbia* (Ottawa: Canadian Centre for Policy Alternatives – BC Office, 2006).
[b] Public-Private Infrastructure Advisory Facility, *Value-for-Money Analysis – Practices and Challenges: How Governments Choose When to Use PPP to Deliver Public Infrastructure and Services* (Washington, DC: World Bank, 2013).
[c] K. Ismail, 'Value for Money (VFM) Assessment Framework for Public Private Partnership (PPP) Approach', *Institute of Graduate Studies, UiTM* 3, no. 3 (2013).

2.3 APPLICATION OF PPP IN INFRASTRUCTURE DEVELOPMENT AND INVESTMENT

The use of the PPP scheme in infrastructure development and investment in Indonesia has progressed significantly since the concept of PPP was introduced in 1998. Between 2015 and 2018, there were 73 PPP infrastructure projects in Indonesia, with a total value of USD 30.2 billion.[3] The number includes both solicited projects initiated by the government (58 projects with a total value of USD 17.4 billion) and unsolicited projects initiated by the private sector (15 projects with a total value of USD 12.8 billion).[4] Four unsolicited projects are in physical infrastructure: two projects are toll roads (Krian-Legundi-Bunder-Manyar toll road and Jakarta-Cikampek Elevated II toll road) and two are clean water projects (Jatiluhur Water Supply and Karian Water Supply).

Furthermore, several PPP projects with a high internal rate of return (IRR), above 13 percent, have been facilitated by a government unit called PINA (Non-Government Budget Investment Financing) in the National Development Planning Agency (BAPPENAS), which helped these projects obtain alternative financing to achieve financial close. PINA facilitates investors through a wide range of financing mechanisms, particularly equity financing. In total, PINA has facilitated 11 projects with a total financial close of USD 3.3 billion.

[3] See Annex B.
[4] See Annex C for the number of PPP projects (solicited and unsolicited, respectively) within each PPP stage and the number of value of these projects.

Box 2.2. Non-Government Budget Investment Financing (PINA)

As the government budget is not extended to all of Indonsia's infrastructure project financing needs, there is a need for the gap to be filled by state-owned enterprises (SOEs) and the private sector. To address this, PINA was established through Presidential Regulation no. 20 of 2016. It exists as a facilitation scheme to accelerate private investment financing of National Strategic Projects (PSN), the funding of which originates from the non-government budget (not from the central government budget (APBN) or the regional government budget (APBD)) and is fully supported by government policies. PINA was specifically created to fulfill the equity portion of the central-level strategic infrastructure and industry project financing needs. PINA has three purposes:

- **Optimise SOE and private-sector contribution to finance development**. SOE and private-sector contribution in the financing of development in Indonesia is expected to be at 58.7 percent of total infrastructure investment in 2015–2019 or IDR 2,817 trillion under the National Medium-Term Development Plan (RPJMN) 2015–2019.
- **Improve the capacity of infrastructure finance**. First, PINA mobilises potential long-term funds (pension funds, insurance, sovereign wealth fund, etc.). Second, it not only helps to improve the financing of greenfield projects but also recycles the investment in brownfield and operational category projects. Last, PINA leverages financing capacity through investment staging at every project development phase.
- **Debottleneck the financing process of priority projects**. Infrastructure development involves several stakeholders who often require special arrangements to coordinate and encourage related stakeholders, especially in project preparation, which includes resolving both financial and non-financial issues.

PINA plays a significant role in accelerating a project's financial close

The PINA Center was established to optimise the functioning of the National Development Planning Agency (BAPPENAS) in sourcing creative financing and issuing financial instruments and relevant regulations that support infrastructure investment. These include but are not limited to direct equity participation, limited equity funds (RDPT), perpetuity notes, asset-backed securities involving the Financial Services Authority (OJK), the Indonesian Accountants Association (IAI) and various SOE securities companies. To achieve financial close, the PINA Center does the following:

- **Provides facilitation**. PINA brings projects to financial close; provides suggestions on project financing structure in collaboration with PT Sarana Multi Infrastruktur (SMI) and Indonesia Infrastucture Finance (IIF); and promotes the project pipeline through international roadshows and one-on-one meetings.
- **Creates pipelines**. PINA prepares the list of projects that are ready to be offered to investors and the list of potential investors. PINA also provides investors with updates on projects.
- **Serves as an ecosystem**. PINA creates an investment ecosystem that encourages more investment in Indonesia through assessing investment regulations and making policy recommendations, which includes relaxing regulations and accelerating the implementation of creative financing instruments.

PINA project criteria

PINA currently focuses on connectivity (toll roads, ports, airports, railways), energy (oil and coal infrastructure, gas pipeline networks, power plants), manufacturing and strategic industries, and housing. Government agencies, SOEs and private enterprises may initiate and purpose their project(s) to be included in the PINA facilitation scheme, so long it fulfills the four key PINA project criteria, specifically:

- **Projects with significant economic and social impact**. Assessment is based on qualitative and quantitative study of a project's economic and social impact.
- **Projects must be feasible**. Assessment is based on a project's investment feasibility, including an internal rate of return (IRR) of a minimum of 13 percent.

- **Projects possesses suitable and legal documents**. Assessment is through a readiness criteria checklist, including submission of documents with information on project profile, action and funding plans, as well as other prerequisite documents.
- **Projects related to economy-wide development objectives.** Projects included in the RPJMN and/or the sectoral central-level strategic plan document.

PINA continues to increase the number of long-term institutional investors, both domestic and international, while continuing to facilitate investment in infrastructure projects by conducting roadshows and socialisation (engagement) forums with various domestic and foreign investors. To date, PINA has facilitated 11 projects with a total financial close of USD 3.3 billion.[a] Long-term investment has come from Australia; Canada; China; Japan; and the Republic of Korea – economies that have shown strong interest in investing in Indonesia's infrastructure projects. Domestic investors include PT SMI (SOE in infrastructure finance), PT Taspen (civil servants pension fund), Asabri (armed forces pension fund) and several of Indonesia's domestic banks.

Note:
[a] Annex B describes PINA's achievements in 2017–2018. From: 'Great Investment Opportunity in Indonesia's Toll Road Development' (presentation by CEO of the PINA Center, London, February 2019).

2.4 FINANCING MECHANISM

Indonesia continues to be dependent on fiscal financing and loans for infrastructure projects as its corporate bond market continues to be relatively shallow compared to its peers. In practice, banks remain major financiers to infrastructure projects. However, banks with short-term liabilities (approximately up to 15 years) are not well suited to hold long-term assets on their balance sheets, such as PPP projects (with concession periods between 30 and 50 years). The limited capacity of commercial banks to finance long-term infrastructure projects further restricts access to infrastructure investment, thereby affecting the bankability and VfM of PPP projects. The maturity mismatch problem thus suggests the need for an alternative source of long-term funding to further support infrastructure financing.

Given this need to increase financial depth and liquidity to a level that could provide private sector investors with long-term funding for infrastructure projects and advance PPP systems, domestic bond markets should be developed. Matching long-term savings to PPP projects will optimise resource allocation and contribute towards economic growth.[5] Various new, existing and upcoming alternative financing instruments have made bond financing and other derivatives pivotal to close the financing gap for infrastructure investments. In addition, the establishment of agencies within infrastructure project financing and advisory services (SMI in 2009 and IIF in 2010) has brought a breath of fresh air since these two agencies act as the catalyst for financing infrastructure development in Indonesia. Furthermore, PINA is coming to be seen as the solution to satisfying the equity portion of central strategic infrastructure and industry project financing needs.

[5] R. Arezki et al., 'From Global Savings Glut to Financing Infrastructure', *Economic Policy* 32, no. 90 (2017): 221–61.

The government strives to attract private sector involvement by offering two options for infrastructure financing. As illustrated in Figure 2.4, these options are:

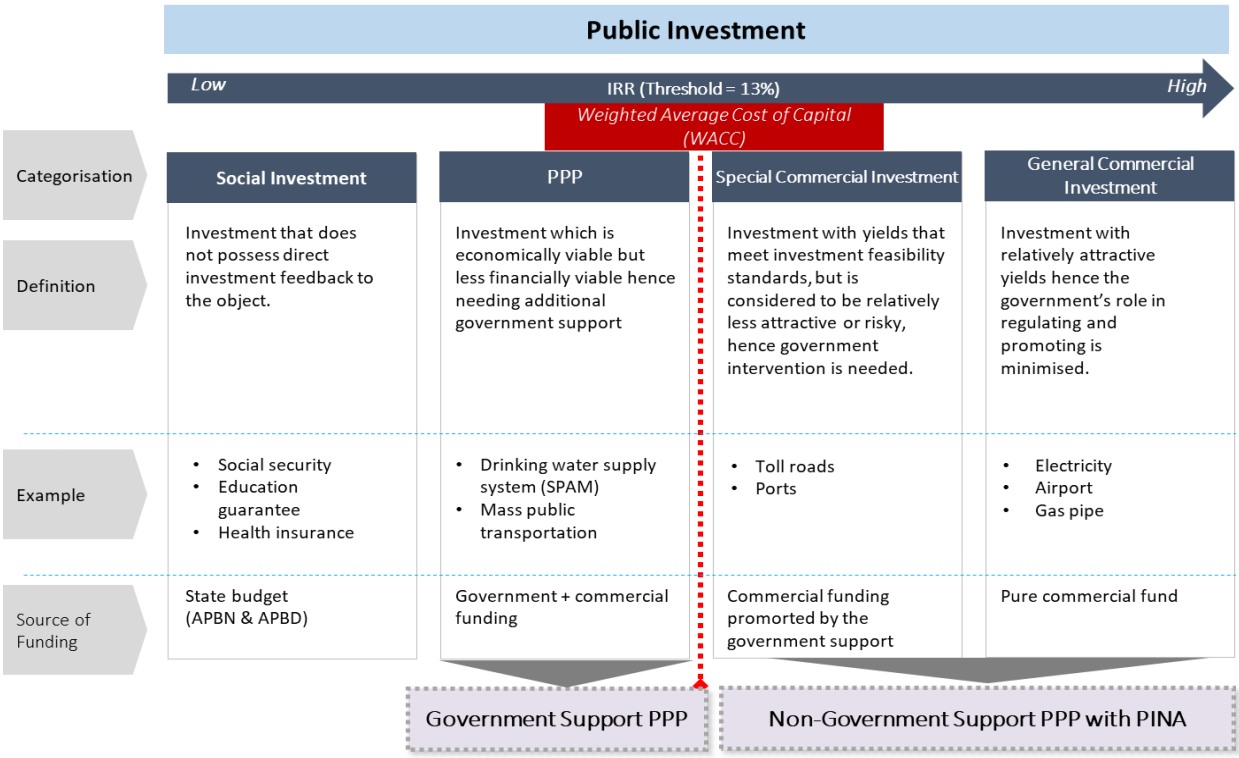
1. **Projects with high IRR use the PINA scheme**

If the PPP project has a high IRR, there will be a clawback mechanism to anyone who gives the highest compensation to the government with a specific ceiling flow. A clawback mechanism is a contractual provision where the private entity or SOE is required to return certain benefits to the government under special circumstances. Hence, in a bidding, the special purpose vehicle (SPV) under the PINA scheme requires the lowest level of government support – or no government support – and has a better chance of winning the bid.

2. **Projects with low IRR use PPP-KPBU with government support and/or guarantee scheme**

If a PPP project has a low IRR, the government structures the PPP project to improve the IRR to reach the normal or acceptable value by providing funding support such as VGF, equity participation and availability payments.

Figure 2.4. Financing scheme in Indonesia



APBD=regional government budget; APBN=central government budget; IRR=internal rate of return; PPP=public–private partnership; SOE=state-owned enterprise; SPAM=clean water supply system
Note: PPP in this table refer to the government of Indonesia's definition of PPP, known as KPBU.
Source: Ministry of National Development Planning/National Development Planning Agency (BAPPENAS) of Indonesia.

The following are several financing instrument options in infrastructure projects in Indonesia:

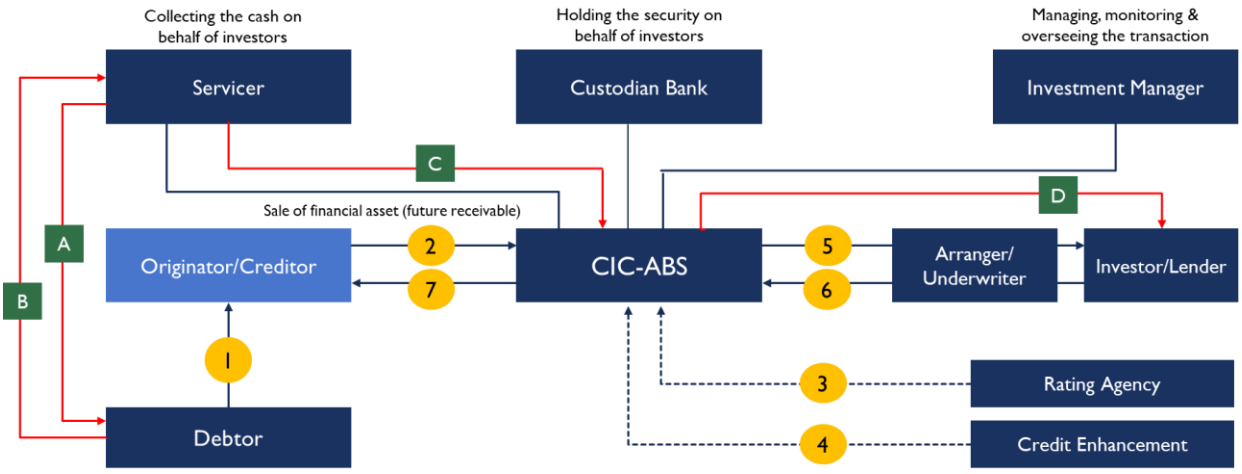
(1) Future revenue based securities (FRBS) – domestic CIC-ABS

Asset-backed securities (ABS) are securities issued by an ABS collective investment contract (CIC) whose portfolio consists of financial assets in the form of bills arising from commercial securities, credit card bills, future receivables, lending (including ownership of loans on house or apartment), debt securities guaranteed by the government, credit enhancement/cash flow and other financial assets.

ABS has several benefits. First, as an alternative long-term funding (up to 10 years), it is more attractive to investors because it is supported by liquid assets, which have a relatively small risk. Second, even if the issuer of an ABS (the originator) goes bankrupt, the bills will always remain. This is different from bonds or promissory notes, where buyers will lose their funds if the issuer or promissory company experiences bankruptcy. Third, ABS is an attractive investment opportunity that offers a higher coupon than government bonds (premium spread) and conventional bonds. Given these benefits, the development of ABS instruments and markets could be a potential alternative for infrastructure project financing.

In Indonesia to date, ABS has been carried out in the housing sector (Danareksa SMF ABS- KPR BTN (DSMF01), backed by home ownership loans), for a toll road (CIC ABS Mandiri (JSMR01), backed by securities of the Jakarta-Bogor-Ciawi (Jagorawi) toll revenues), and for a power plant (DIM and IP CIC-ABS Danareksa Indonesia Power PLN 1 (DIPP1), backed by electricity sales receivables in Suralaya power plant 1–4). Jasa Marga's investment product, the Jagorawi toll securities, was based on FRBS; and was the first FRBS issued in the history of capital markets in Indonesia. The issuance of ABS received an overwhelming response from investors, from pension funds to banks and asset management companies. Demand reached IDR 5.1 trillion, equivalent to 2.7 times the total issuance value. Figure 2.5 illustrates the CIC-ABS structure of the DIM and IP CIC-ABS Danareksa Indonesia Power PLN 1 (DIPP1).

Figure 2.5. Structure of DIM and IP CIC-ABS Danareksa Indonesia Power PLN 1 (DIPP1)



Source: PT Danareksa Investment Management.

CIC-ABS=collective investment contract of asset-backed securities; DIM=PT Danareksa Investment Management; IP=PT Indonesia Power

Note:

A. The Servicer (service provider) as the party that collects the customer's electricity bill, usually the same as the Originator collecting from the Debtor.
B. PLN makes payment of electricity bill receivables to Servicer.
C. Servicers provide billing results to CIC-ABS to be used as a source of coupon and principal payments.
D. CIC-ABS pays the return of investment principal and the payment of coupons to Investors at maturity.

Structure indication flow:

1. Originator (PT IP) has assets in the form of electricity bill receivables to PLN.
2. Electricity bill receivables are then sold as underlying assets to the CIC-ABS formed by the Investment Manager and Custodian Bank using the discounted cash flow method in a true sale (from the legal side).
3. The rating agency performs a rating of the CIC-ABS to be issued along with the quality of the underlying assets in it.
4. Credit Enhancement party as the party that gives additional value to the CIC-ABS rating.
5. CIC-ABS is purchased through a selling agent after receiving an effective letter and the investor is entitled to the interest and principal.
6. The investor provides funds to make purchases of the CIC-ABS through a selling agent to obtain the right to pay interest and the principal.
7. CIC-ABS forwards funds from the investors to the Originator or Creditor to be used to produce electricity and build power plants.

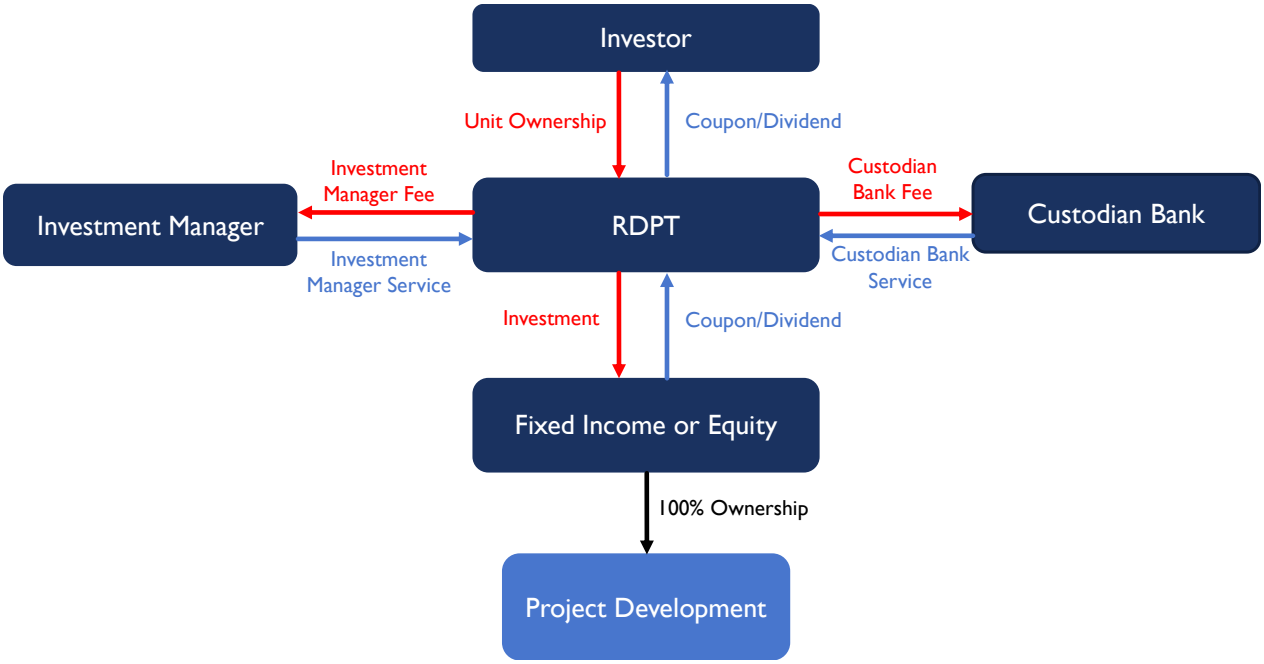
(2) Limited equity fund (RDPT)

RDPT is an instrument registered at Indonesia's Financial Services Authority (OJK) and is used to raise funds from professional financiers (a maximum of 49 investors). RDPT is then invested by investment managers in securities portfolios based on real sector activities. RDPT can be a stock-based (an equity participation) security or a debt security.

Projects that have used RDPT financing include: Kertajati airport in West Java; several Trans-Java toll road sections (through PT Jasa Marga), namely, PT Jasamarga Semarang Batang (JSB), PT

Jasamarga Solo Ngawi (JSN) and PT Jasamarga Ngawi Kertosono Kediri (JNKK); and a coal-fired power plant in Meulaboh, Aceh. Figure 2.6 illustrates the structure of an RDPT.

Figure 2.6. Structure of RDPT



RDPT=limited equity fund
Source: LPEM FEB UI.

(3) Perpetuity notes

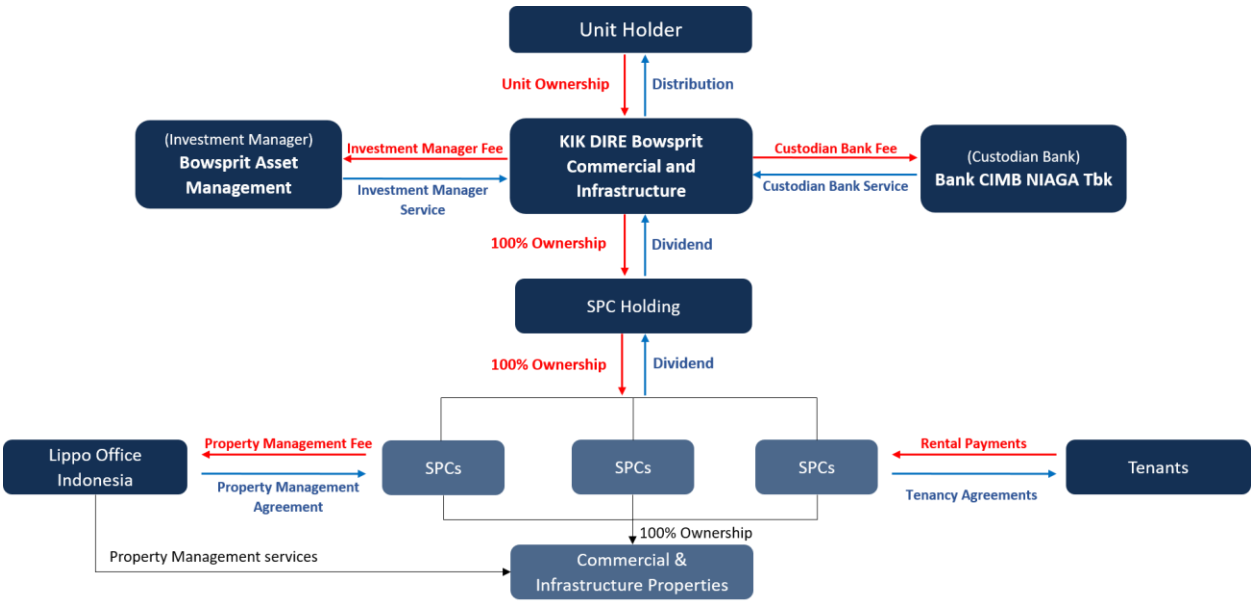
Perpetuity notes are securities issued without a repayment period, and coupon payments are made regularly, so incoming funds can be used to reinforce the long-term equity of the company in the construction of infrastructure projects. Perpetuity notes address the needs of long-term investors, such as pension funds and insurance, interested in investing in infrastructure projects. The projects using perpetuity notes are the Trans-Java toll road by PT Waskita Karya (its long-term investors include a pension fund (PT Taspen) and SMI) and a coal-fired power plant in Meulaboh, Aceh.

(4) Real estate investment trust (REIT, or DIRE)

REITs are commonly referred to as DIRE in Indonesia (from *dana investasi real estate*). DIRE is a collective investment contract which aims to raise capital from various investors to invest in real estate, both directly (by buying buildings or apartments where the rental and sale proceeds from the property assets are returned to investors as dividends) or indirectly (by buying shares or bonds issued by property companies). DIRE can contribute to improving infrastructure in Indonesia and provide a pathway for prospective investors to invest directly in infrastructure facilities in the form of rental warehouses, cold storage, parking buildings and data centres.

Currently, there are two open DIRE investments in Indonesia: Ciptadana DIRE which oversees Solo Grand Mall and DIRE Bowsprit Commercial & Infrastructure. DIRE Bowsprit Commercial & Infrastructure is the largest DIRE specialising in commercial and infrastructure properties in Indonesia, and is sponsored by PT Lippo Karawaci Tbk, Indonesia's largest broad-based listed property company (see Figure 2.7). This DIRE has an initial portfolio of four office towers and one distribution centre with combined semi gross area of 157,000 sqm and it is set to grow with the acquisition of other commercial and infrastructure properties in the future.

Figure 2.7. Structure of DIRE Bowsprit Commercial & Infrastructure



SPC = special purpose company
Source: Bowsprit Asset Management.

(5) Infrastructure investment fund (DINFRA)

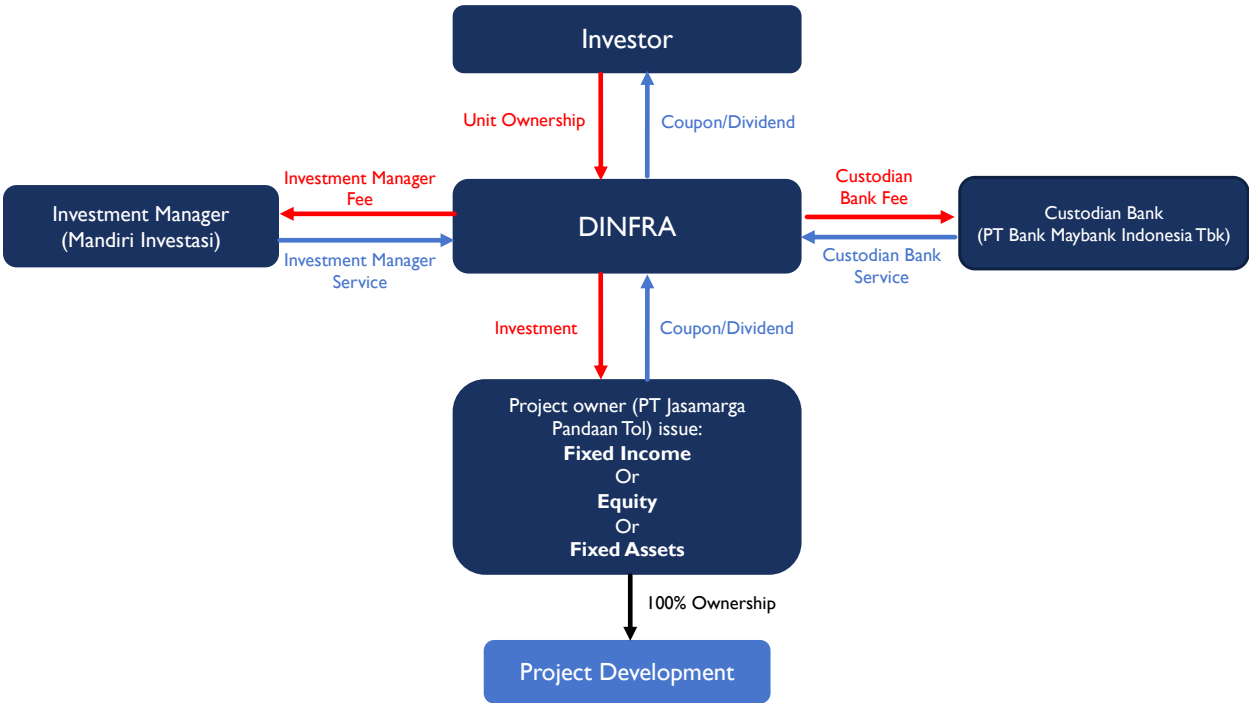
DINFRA is a capital market instrument in the form of a CIC which requires portfolio weight allocation of at least 51 percent of the total net asset value of the infrastructure sector. The majority of these funds are invested in infrastructure assets in the form of debt and/or equity by the investment manager either directly (by purchasing infrastructure assets in which leases and sales are returned to shareholders as dividends) or indirectly (by purchasing shares or bonds issued by infrastructure-related companies). DINFRA can be offered through public offers or limited offers.

With DINFRA, retail investors can get involved in the infrastructure investment sector. In addition, it can be listed on the stock exchange, which increases liquidity as shareholders could sell DINFRA ownership to other investors. CIC-DINFRA also offers the additional advantage of being able to diversify portfolios to infrastructure investments that are not yet constructed or under construction (greenfield) or that have generated revenue (brownfield) through alternative means of investment that have the potential to reduce portfolio volatility.

CIC-DINFRA Toll Road Mandiri-001 is the first DINFRA instrument in Indonesia that is listed and traded on the Indonesia Stock Exchange. Under the DINFRA Toll Road Mandiri-001 scheme,

investors place funds in the DINFRA managed by the investment manager in the form of CIC-DINFRA Participation Units (see Figure 2.8). The funds will be used by the investment manager to invest in infrastructure assets by buying shares of PT Jasamarga Pandaan Tol, the owner of the Gempol-Pandaan toll road segment, which is a subsidiary of PT Jasa Marga (Persero) Tbk, both by taking part in the issuance of new shares or by purchasing ownership from Jasa Marga in PT Jasamarga Pandaan Tol. Mandiri Investasi acts as an investment manager supported by PT Mandiri Sekuritas as arranger and PT Bank Maybank Indonesia Tbk as custodian bank. PT Jasamarga Pandaan Tol is the manager (project owner) of the 13.61km Gempol-Pandaan toll road. The Gempol-Pandaan toll road section connects the Surabaya-Gempol toll road and the Pandaan-Malang toll road, which has a concession period of 37 years and has been operating since 2015.

Figure 2.8. Structure of CIC-DINFRA Toll Road Mandiri-001

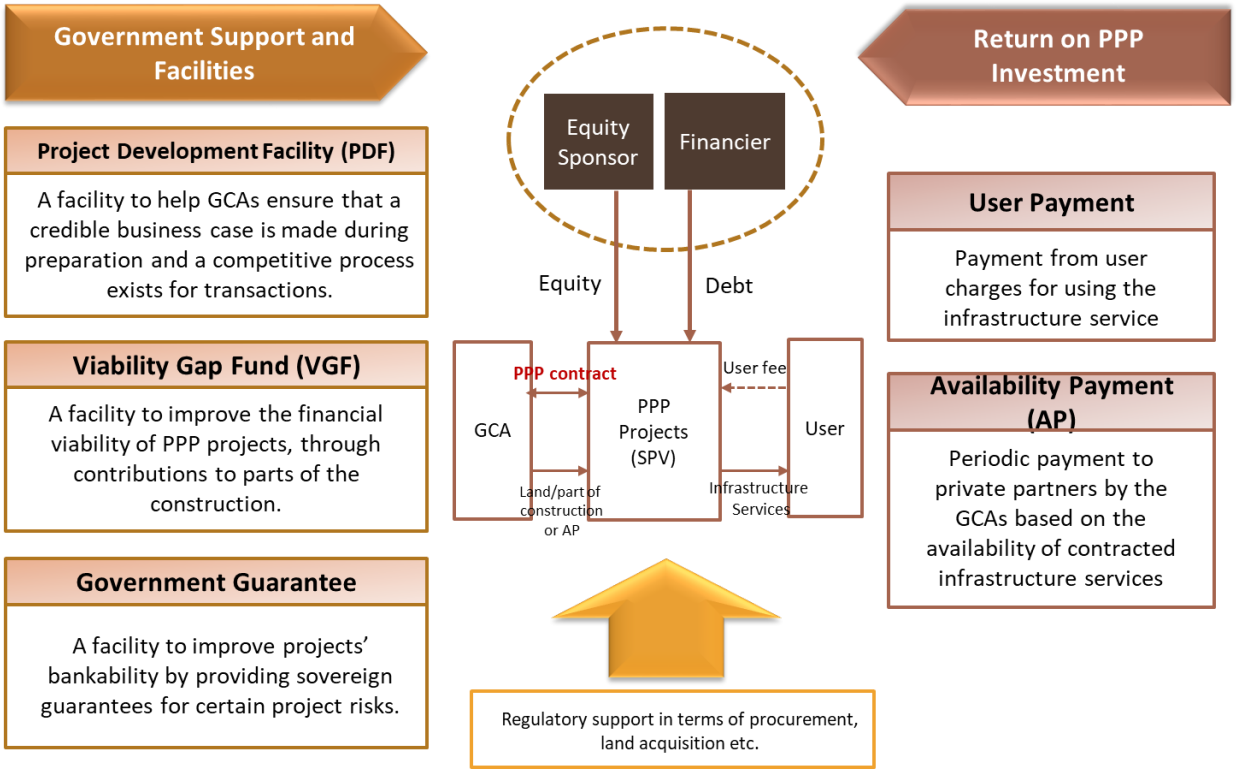


CIC=collective investment contract; DINFRA=infrastructure investment fund
Source: LPEM FEB UI

2.5 GOVERNMENT SUPPORT AND FACILITIES

The government has taken various initiatives to support infrastructure development under the PPP-KPBU scheme, such as PDF, VGF, government guarantee and regulatory support in procurement and land acquisition. The government also provides the availability payment mechanism that gives investment repayment certainty for private investors. Figure 2.9 describes available government support for PPP-KPBU projects.

Figure 2.9. Government support and facilities, and return on PPP-KPBU investment



GCA=government contracting agency; PPP=public–private partnership; KPBU=PPP projects under the Presidential Regulation no.. 38 of 2015; SPV=special purpose vehicle
Source: Ministry of Finance of Indonesia.

Viability gap fund (VGF)

Infrastructure initiatives introduced under PPP schemes must be economically and financially viable in order to encourage private sector participation. The issue in Indonesia is that only around 10 percent of all planned PPP projects are financially feasible, while the rest have marginal financial feasibility. Government support is needed to improve the financial feasibility of PPP projects, thus reducing the cost of the projects and increasing the rate of return. In 2012, under Minister of Finance Regulation no. 223/PMK.011/2012 the government introduced VGF assistance for infrastructure projects.

VGF is a government support in the form of a partial contribution, up to a maximum of 49 percent of the construction, equipment and installation costs of an infrastructure PPP project that has reached economic viability but not financial viability. VGF is provided as the last resort if there is no alternative that will make the project financially viable. It would only be given to infrastructure projects that are unable to deliver large profits or with too long a turnaround time to attract investors to participate in the tender. VGF does not include costs related to land acquisition and tax incentives. Currently, PPP projects that have obtained approval are SPAM Umbulan in East Java with VGF value of IDR 818.01 billion and SPAM Bandar Lampung with VGF value of IDR 258.8 billion.

Overall, VGF offers several benefits. First, it reduces the project cost to be borne by private parties. Second, it increases the financial feasibility of PPP-KPBU projects, thus attracting the interest and participation of the private sector. Third, it increases the certainty with which a project company can engage in procurement in accordance to quality standards and the planned timeline. Last, it allows for the delivery of a public service at an affordable tariff for the community. A PPP-KPBU project is eligible for VGF if it meets the following conditions:

- The project has met the economic viability but not the financial feasibility criteria.
- It implements the user pay principle.
- It has a total investment cost of not less than IDR 100 billion.
- It is held by a project company that obtained it through an open and competitive bidding process.
- It has a scheme for the transfer of assets and/or transfer of asset management from the project company to the GCA at the end of the period of cooperation.
- It has prepared a comprehensive pre-feasibility study that:
    - provides information on optimal risk sharing.
    - concludes that the project is feasible in terms of the technical, legal, environmental and social aspects.
    - shows that the PPP project becomes financially feasible with support.

Government guarantee

To mitigate government-related financial risk, the government provides guarantee assistance through the IIGFestablished in 2009. The IIGF acts as a guarantor for the various infrastructure risks stemming from government inaction that could result in financial losses for PPP infrastructure projects, including, for example, licence delays, financial close termination or delays, amendments to legislation and regulatory provisions, or changes to tariff structure.

The IIGF guarantees the GCA's financial obligations by paying compensation to business entities when infrastructure risks arise in accordance with the allocation agreed in the PPP-KPBU agreement. The infrastructure guarantee is implemented by the IIGF as a single-window policy. If the coverage needs of a guarantee exceed the capacity of the IIGF, there will be a co-guarantee between the Ministry of Finance and the IIGF.

A PPP-KPBU project is eligible for the guarantee when it meets the following conditions:

- The project complies with the rules stated in Presidential Regulation no. 38 of 2015.
- It complies with the sectoral regulations and the project was awarded through a transparent and competitive bidding process.
- It is feasible in terms of technical, economic, legal and environmental aspects and has no negative impact on social aspects.
- The feasibility study has been performed using the services of an independent and professional consultant.
- There are binding arbitration provisions in the PPP agreement.

As of 2017, the Minitry of Finance has made guarantee agreements with seven PPP-KPBU projects. They are the PLTU Batang project (Central Java Power Plant), Jakarta-Cikampek II toll road (elevated), Krian-Legundi-Bunder-Manyar toll road, Cileunyi Sumedang-Dawuan toll road,

Serang-Panimbang toll road, Probolinggo-Banyuwangi toll road, South Jakarta-Cikampek II toll road, Pandaan-Malang toll road, Batang-Semarang toll road, Manado-Bitung toll road, Balikpapan-Samarinda toll road and Makassar-Parepare Railway.

Project Development Facility (PDF)

To develop the required documentation standards and studies in the preparation and the implementation of PPP-KPBU project transactions, particularly the pre-feasibility study and the PPP agreement design documents, the government provides support through the PDF. The primary function of the PDF is to help the GCA increase the effectiveness of the preparation and/or the implementation of PPP project transactions, to meet the specified quality and time. The PDF encompasses several types of facilities:

- *Project preparation facility*
    - Preparation of the pre-feasibility study (to assess the feasibility of a PPP by considering at the minimum the legal, technical, economic, financial, risk management, environmental and social aspects)
    - Preparation of all studies and documents supporting the pre-feasibility study
- *Transaction assistance facility*
    - Procurement of implementing business entities
    - PPP agreement signing
    - Financing for the PPP project (financial close) as long as it is part of the responsibility allocated to the GCA based on the PPP agreement
- *Combined project preparation and transaction assistance facilities.* The scope consists of a combination of the two types of facilities.

Currently, PT SMI and IIGF are the institutions responsible for the PDF. In the near future, the Ministry of Finance will cooperate with other institutions such as Danareksa to contribute directly to the PDF to assist and prepare PPP projects. The project criteria for the PDF are: first, the project must be included in the central-level priority PPP project list (PPP Blue Book); second, the project is on PPP project development and/or development of domestic oil refineries; and/or third, other PPP projects that meet the criteria as stipulated in the Ministry of Finance Regulation.

Land acquisition fund

In Indonesia, land acquisition is an obligation of the GCA, and Presidential Regulation no. 30 of 2015 which allows investors to prefinance land acquisition and later recovered by the government. In 2017, the Ministry of Finance introduced a land acquisition scheme for national strategic infrastructure PPP projects through LMAN. The agency is required to provide land funds for these projects to guarantee timely procurement to boost private infrastructure investment.

According to Presidential Regulation no. 38 of 2015, the source of funding for land acquisition for PPP projects that are listed as PSN is the central government budget (APBN) and/or the regional government budget (APBD). If the GCA is an SOE (including the regional SOE known as BUMD), the source of funding for land acquisition will be from the budget of the SOE or from the business entity through cooperation with the concerned SOE. If a PPP-KPBU is financially feasible, the implementing business entity may repay in part or in full the cost of the land acquisition that had been carried out by the government.

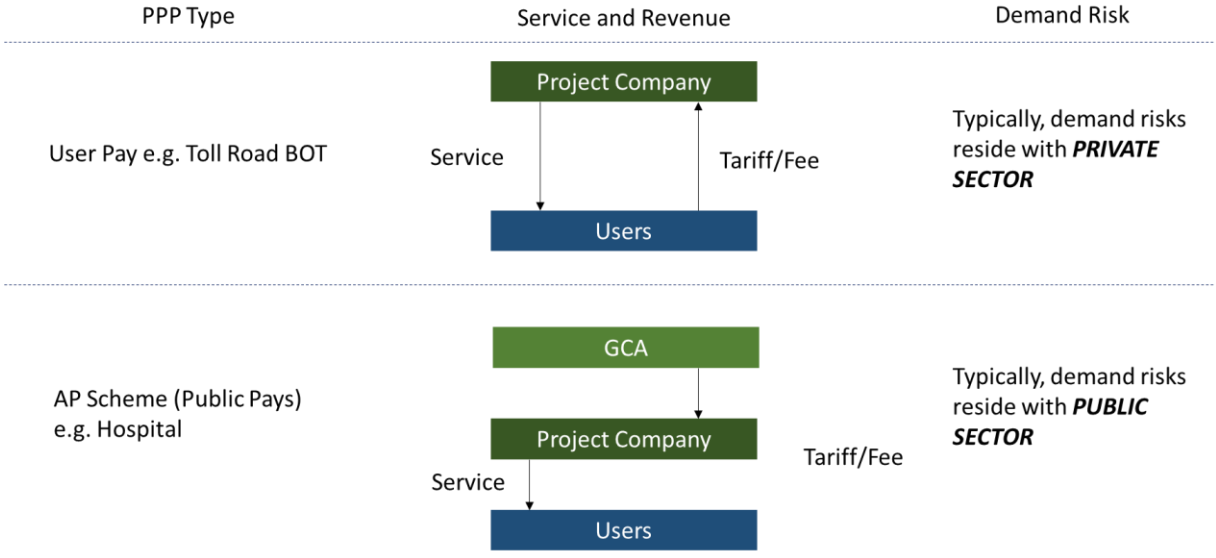
In addition to the VGF, PDF, government guarantees and land acquisition fund, the government also supports equity participation through SOEs, tax holidays and tax allowances, as well as licence time deduction. The various government support facilities have been proven successful in encouraging PPP projects that have long been in preparation to finally reach the signing stage of the contract and also financial close.

Availability payment

The government has introduced a new mechanism that expands the types of return on PPP-KPBU investment, namely, availability payments. The availability payment is made from the GCA to the SPC as a reward for ensuring the availability of the facility and for providing specified services under a PPP-KPBU contract. The availability payment is a fixed amount and is paid throughout the operation period, with a possible deduction in case the SPC fails to fulfill certain requirements. The availability payment essentially covers all costs (construction, operation and maintenance, project financing, etc.) and also the return for investors. The Palapa Ring Project in Indonesia's telecommunication sector was the first PPP-KPBU project to use the availability payment scheme. As illustrated in Figure 2.10, availability payment differs from user payment in the following ways:

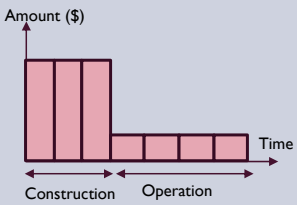
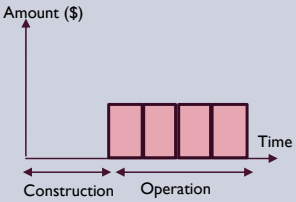
- The government will not need to bear the construction cost of the infrastructure project (see Table 2.5).
- The business entity has investment repayment certainty.
- The business entity will not bear the demand risk.
- The source of funds for the availability payment comes from the government budget and has a flat payment schedule.

Figure 2.10. User payment vs. availability payment



AP=availability payment; BOT=build–operate–transfer; GCA=government contracting agency
Source: Committee for Accelerating the Provision of Infrastructure (KPPIP).

Table 2.5. Conventional scheme vs. availability payment scheme

	Conventional Scheme (APBN/APBD)	AP Scheme
Fiscal Burden/ Payment Schedule	Top Heavy 	Flat 
Typical Contract Year	Construction (1-3 years) Maintenance (Every year)	10-30 Years
Financial Source for Construction	Public	Private
Typical Risk Allocation	Public	*Risks are transferred to Private
Procurement	Several (Design, Construction, Operation)	Only One (Single PPP Contract)

AP=availability payment; APBD=regional government budget; APBN=central government budget; PPP=public–private partnership
Source: Committee for Accelerating the Provision of Infrastructure (KPPIP).

2.6 RISK MANAGEMENT STRATEGY

In PPP projects, there are certain risks that must be managed well by the business entity. These risks may come from the government (local or central), external factors such as demand and unforeseen circumstances, or from the project itself (engineering, construction, and operation and maintenance). In general, the PPP regulation has set these risks to be equally distributed between the government and the business entity. Specifically, in the context of demand risk, this is mostly imposed on the private entity. The IIGF risk allocation guideline notes that as the demand projection is calculated by the private entity, mistakes made on the projection (unless due to government interventions/policies) are to be fully borne by the private entity. While there are best practices to give soft loans if demand is not fulfilled, this approach has not been adopted yet in Indonesia. In the case of changes of law, the risk may be borne by the government or the private entity depending on the type of change. If the change is discriminatory (only affecting a specific PPP project), the government is responsible. However, if there is a general change in regulations, the private entity bears the risk.[6]

[6] Indonesia Infrastructure Guarantee Fund (IIGF), 'Risk Allocation Guideline Public Private Partnership (PPP) in Indonesia' (Jakarta: IIGF, 2017), https://www.iigf.co.id/media/kcfinder/docs/risk-allocation-guideline-2017-tanpa-sambutan.pdf

Table 2.6. Types of risk and allocation in PPP-KPBU projects based on Presidential Regulation no. 38 of 2015

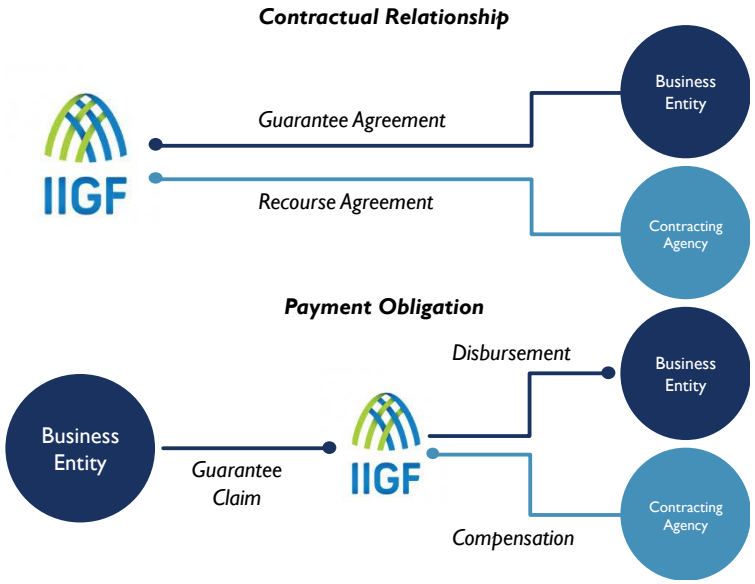
Type of Risk	Allocation		Elaboration
	GoI	Business	
1. Land Aquisition	√		Project land will be unavailable or unable to be used at the required time (UU 2/2012)
2. Engineering		√	Risk that PC's design may not achieve the required output specifications
3. Construction		√	Risk that there are delays in project construction (due to PC)
4. O&M		√	Services do not achieve agreed specifications and/or come within the projected costs
5. Tariff Adjsutment Risk	√		Risk of tariff changes due to regulations
6. Traffic/Demand		√	Risk that the demand for a service is unexpectedly lower than initially projected
7. Change of Law	√	√	Risk of a change in legislation
8. *Force Majeure*	√	√	Risk of a specified event entirely outside the control of either party

GoI=Government of Indonesia; O&M=operation and maintenance; PC=project company
Source: Presidential Regulation no. 38/2015.

To manage some of the risks listed in Table 2.6, the government has provided preventive (SMI) and curative (state asset management and IIGF) risk mitigation that are facilitated through a few agencies as follows:

- *Risk insurance instrument*: The IIGF, established in 2009, was created as a market solution insurance for central or regional government risks in PPP projects, such as land acquisition, termination by the government, payment failure, default by PJPK (the government institution responsible for the PPP project), *force majeure*, tariff adjustment risk, etc. (as of 5 April 2019, 18 projects have been insured by the IIGF). The IIGF was created as a bumper mechanism to protect the government. Due to the government having limited and rigid budgets, the IIGF will bear the major part of the compensation. The government will eventually compensate the IIGF through a recourse agreement. However, the IIGF itself has limited budget capacity. Therefore, the IIGF has set a maximum compensation per case (which has not been surpassed so far) and arranged co-guarantees with other agencies such as the government and multilateral agencies.

Figure 2.11. IIGF guarantee – contractual and payment mechanism



Source: Indonesia Infrastructure Guarantee Fund (IIGF), 'Frequently Asked Questions', 2019, http://www.iigf.co.id/id/business/faq

- *Land acquisition financing support*: LMAN is an agency created in December 2015 under the Ministry of Finance to manage state-owned assets. In 2016, LMAN was given the mandate to support the financing of land acquisition for PPP projects under the PSN list (Ministry of Finance Regulation no. 21 of 2017). It was also given a flexible budget (the funds can be allocated to the next year or for other projects if unutilised). The land acquisition may be financed using the corporate funds (bailout funds) mechanism or direct payment mechanism by LMAN; the bailout funds[7] mechanism is usually used (as of 2018 direct payment had not been done). Under this mechanism, the company must pay for the cost for land acquisition first, with reimbursement later by LMAN (Figure 2.12). As of 31 March 2019, IDR 34,968 trillion had been paid (from a total claim of IDR 38,777 trillion from 15 dam projects, 63 toll routes, 5 train routes and a few harbour projects).

- *Risk calculation support*: SMI is in the process of creating a risk database called Datamart. This database will contain the list of risk figures that are often calculated and newly experienced in ongoing projects. This database will help SMI to guide the private sector to calculate all possible risks (accurately calculating financial and economic costs) when creating the pre-feasibility document.

[7] The bailout fund includes a cost of fund that uses this formula: Cost of Fund = (BI 7 Day Repo Rate) x (Length of Compensation (Days)/365) x (Payment by Business Entity).

Figure 2.12. Bailout fund mechanism by LMAN

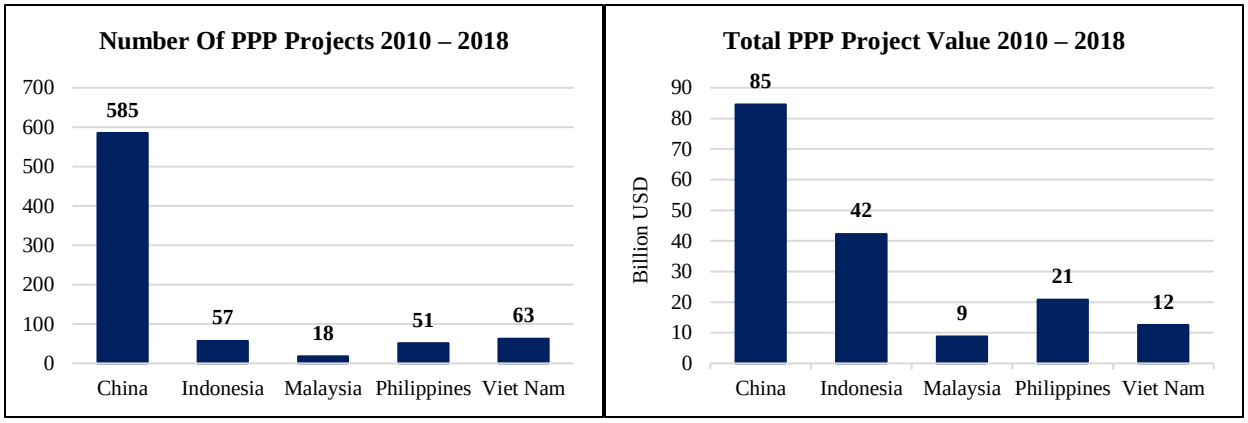
LMAN=State Asset Management Agency
Source: Ministry of Finance Regulation no. 21/2017.

By regulation, most risks have been mitigated and shared properly by the government. However, in practice, there are persisting challenges in the risk mitigation mechanism. One of the problems is the permeability of the regulations, which creates uncertainty for business entities. Due to the dynamics of politics in Indonesia, both in the central or regional governments, regulations are subject to change. An example of a change of policy is the tariff change by the government in the case of the Trans-Java toll. Another challenge is the delay in the reimbursement process for land acquisition. This causes financial strain for the private sector especially as these costs happen early in the project (during the construction stage) and business entities tend to borrow money at a high interest rate to finance these costs. Due to such delays, reimbursement by LMAN falls short of the actual costs incurred, that is, the additional interest expense due to the delay has to be borne by the contractor. Documentation issues are a factor, and to address this, LMAN has opened service counters to check that the proper documents have been thoroughly submitted and to provide information on the documents needed to complete the process faster.

2.7 BENCHMARKING AGAINST PEERS IN THE REGION

Compared to other economies, Indonesia has quickly established its PPP institutions. Based on the number of PPP projects, Indonesia has the third highest number of projects, behind Viet Nam and China (Figure 2.13). This is due to the high growth registered between 2016 and 2018. China, which is the more established economy in the area of PPP project development, has 10 times the number of PPP projects as compared to Indonesia. However, in terms of the value of PPP projects, Indonesia is the second highest, only behind China. The value of PPP projects in China is only twice as much in Indonesia. This shows that while the number of PPP projects in Indonesia is significantly lower than China, the value per project is higher.

Figure 2.13. Number and value of PPP projects in China; Indonesia; Malaysia; the Philippines; and Viet Nam

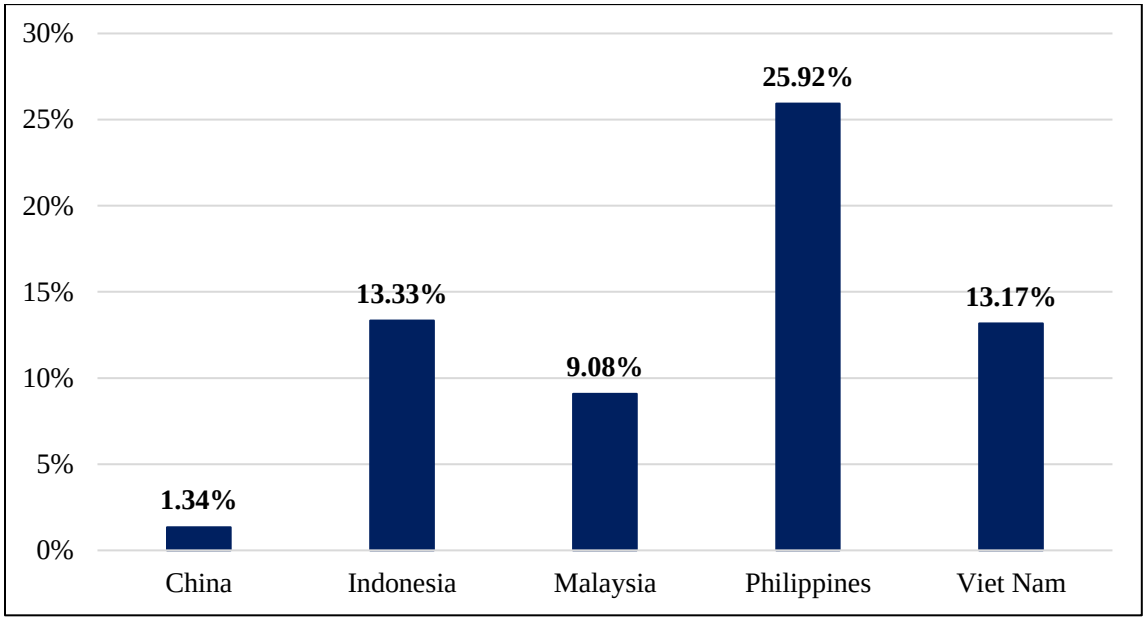


Note: Only PPP projects that have achieved financial close are considered in the dataset.
Source: PPI World Bank Database 2019.

The ratio of average value of PPP projects to average value of total investment suggests that investment is largely channelled toward non-PPP projects in all 5 economies.[8] While this may be so, following the recent developments in PPP regulations in Indonesia, there has been a rise in PPP projects (starting in 2014), increasing the contribution of PPP in infrastructure spending. This is reflected by Indonesia continuing to be ahead in PPP investment, with 13.33 percent of investment channelled toward PPP projects, behind only the Philippines (which established its PPP foundations as early as 2010).

[8] This is calculated by dividing the average value of PPP projects from 2010–2018 with the average value of total investment from 2010–2018.

Figure 2.14. PPP project value from investment spending in China; Indonesia; Malaysia; the Philippines; and Viet Nam, 2010–2018



Source: PPI Worldbank Database 2019; Global Infrastructure Outlook 2019.

In comparison to other economies in the region, Indonesia has made progress in terms of providing better government support for PPP-KPBU. In terms of land acquisition financing, Indonesia has established both an agency (LMAN) and provided funds while other APEC economies have mostly only provided one of these services (for example, the Philippines has specific funds for land acquisition).[9] In terms of compensation for unsolicited projects, the government has generally provided more options. Furthermore, it has also increasingly improved its risk-sharing arrangements to match those provided by others in the region. Indonesia has shared the risk fairly equally between the government and the private entity. Similarly, in Malaysia and China, the traffic demand is shared between the government and the private entity, with Malaysia providing a soft loans facility when demand is low and China providing a minimum traffic agreement.

Despite the advances Indonesia has made, there is still room to learn from other economies. For instance, while two-stage procurement has been taken up by most economies, it has only been recently piloted in Indonesia.

[9] Asian Development Bank (ADB), 'Public-Private Partnership Systems in the Republic of Korea, the Philippines, and Indonesia' (Manila: ADB, 2018).

Table 2.7. Comparison of PPP aspects in China; Indonesia; Malaysia; the Philippines; and Viet Nam

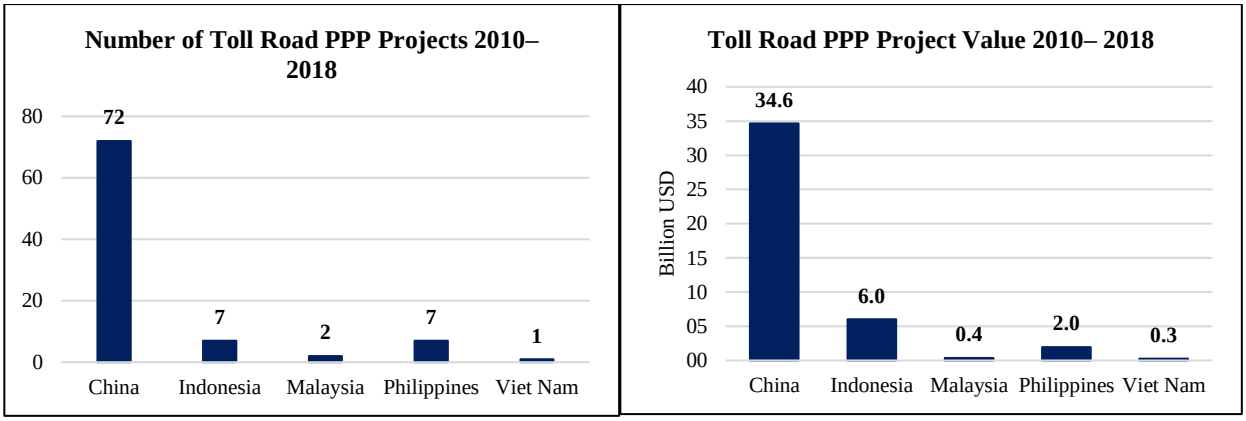
Indicator	China	Indonesia	Malaysia	Philippines	Viet Nam
PPP Unit	PPP Center (under Ministry of Finance)	PPP Joint Office	PPP Unit (UKAS)	PPP Center	Ministry of Planning and Investment – PPP Unit
Government Support	VGF, land acquisition financing, minimal demand guarantee, tax subsidies	Land acquisition financing, PDF, VGF, tax incentives	Facilitation funds, tax incentives	VGF, direct government equity, project development and monitoring fund, PPP strategic support fund	PDF, VGF, government guarantee, tax incentives
Government Support in Land Acquisition	Land acquisition financing (not obligated)	State Asset Management Agency (financing), land acquisition fund	-	PPP strategic support fund	-
Bidding Process	Two-stage	One-stage and two-stage (recently piloted)	One-stage	One-stage and two-stage	One-stage and two-stage
Concession Types	BOT, DBFO	BOT, BOT+, BOOT, DBOM, DBFO, DBFOO, LDO, O&M, BOO, ROT (piloting)	BOT, BLMT, BOO, BLT	BOT, BTO, BOO, BT, BLT, CAO, DOT, ROT, ROO	BOT, BTO, BOO, O&M, BLT, BTL
Unsolicited Project Compensation	Bonus system	Bonus points, right-to-match proposal buyout	Right-to-match	Right-to-match	Direct appointment (if foreign), bonus system
Risk Sharing					
Land Acquisition	Government	Government	Government	Government (solicited) or private (unsolicited)	Government
Engineering, Construction, O&M	Private	Private	Private	Private	Private
Traffic/Demand	Government	Private	Shared	Private	Private
Change of Law	Government (negotiable)	Government or private (depending on type of law change)	Shared	Government	Government (not explicit in regulation)
Force Majeure	Shared (negotiable)	Shared	Shared (not explicit in regulation)	Shared	Shared (not explicit in regulation)

BOT=build–operate–transfer; BOO=build–own–operate; BOOT=build–own–operate–transfer; BT=build–transfer; BTO=build–transfer–operate; BLT=build–lease–transfer; BLMT=build–lease–manage–transfer; BTL=build–transfer–lease; CAO=contract-add-operate; DBFO=design–build–finance–operate; DBFOO=design–build–finance–own–operate; DBOM=design–build–operate–maintain; DOT=develop-operate-transfer; LDO=lease–develop–operate; O&M=operation and maintenance; PDF=project development facility; ROO=rehabilitate-own-operate; ROT=rehabilitate–operate–transfer, VGF=viability gap fund.

Source: Asian Development Bank (ADB), 'Public-Private Partnership Systems in the Republic of Korea, the Philippines, and Indonesia' (Manila: ADB, 2018).

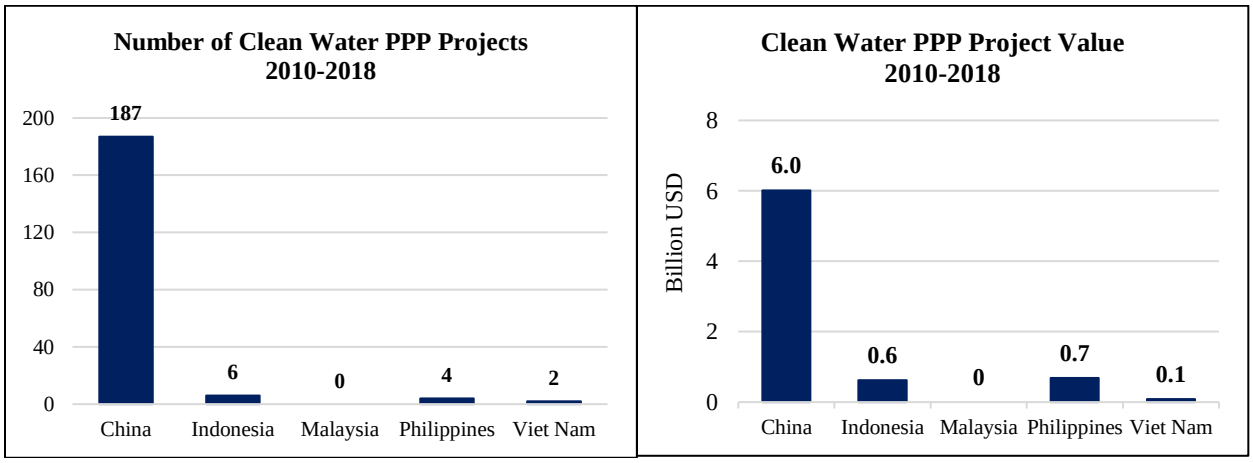
For toll roads and clean water, the data show that compared to its peers (excluding China), Indonesia has performed relatively well (Figures 2.15 and 2.16). For instance, in terms of number of PPP projects, Indonesia is second highest in the two sectors. In terms of value, Indonesia ranks second in the toll road sector and third in the water sector.

Figure 2.15. Number and value of toll road PPP projects in China; Indonesia; Malaysia; the Philippines; and Viet Nam



Note: Only PPP projects that have achieved financial close are considered in the dataset.
Source: PPI Worldbank Database 2019.

Figure 2.16. Number and value of clean water PPP projects in China; Indonesia; Malaysia; the Philippines; and Viet Nam



Note: Only PPP projects that have achieved financial close are considered in the dataset.
Source: PPI Worldbank Database 2019; Global Infrastructure Outlook 2019.

3. TOLL ROAD DEVELOPMENT IN INDONESIA

3.1 OVERVIEW OF THE SECTOR

The development of toll road infrastructure in Indonesia began in 1978. The first operated toll road was Jagorawi (Jakarta-Bogor-Ciawi) which stretched 59 kilometres. At the time, the construction was financed jointly through funds from the central government budget (APBN) and foreign loans in PT Jasa Marga (Persero) Tbk's equity. Jasa Marga was also mandated by the government to build more toll road projects with the land acquisition fees borne by the government.

Around a decade after the first toll road development, private entities began to participate in toll road infrastructure as toll road operators. Jasa Marga was given the mandate to act as the toll road authority. This meant that the concession authorisation agreements (*perjanjian kuasa pengusahaan*) for toll road build–operate–transfer (BOT) schemes were signed under Jasa Marga. As the regulator as well as an operator, Jasa Marga built and operated around 76 percent (418km) of the total toll roads in 2007; while the remaining 135 kilometres were operated by private entities.

During 1995–1997, the government made efforts to accelerate toll road construction through the tender of 19 new toll road projects (totalling 762km). The financial crisis scuttled these expansion plans. Consequently, the development of toll roads in Indonesia stagnated, with the total length of operated toll road from 1997 to 2001 reaching only 13.3 kilometres. The high amount of needed infrastructure investments drove the government to introduce Presidential Decree no. 7 on PPP in the provision of infrastructure in 1998. Subsequently, in 2002, the government issued Presidential Decree no. 15 on the continuation of infrastructure projects; and four new toll roads were operated from 2001 to 2004.

Aside from the technical and construction process, the government has improved the institutional framework for toll road development. In particular, Law no. 38 in 2004 made the Indonesia Toll Road Authority (BPJT) a government contracting agency (GCA), a role previously held by Jasa Marga. Toll road development started to re-accelerate in 2005 with the length of operated toll road reaching up to 1,560 kilometres.[10] In addition to the changes to the institutional frameworks, the government also developed two investment schemes: a full financing model by the private sector, and public–private partnerships (PPP).

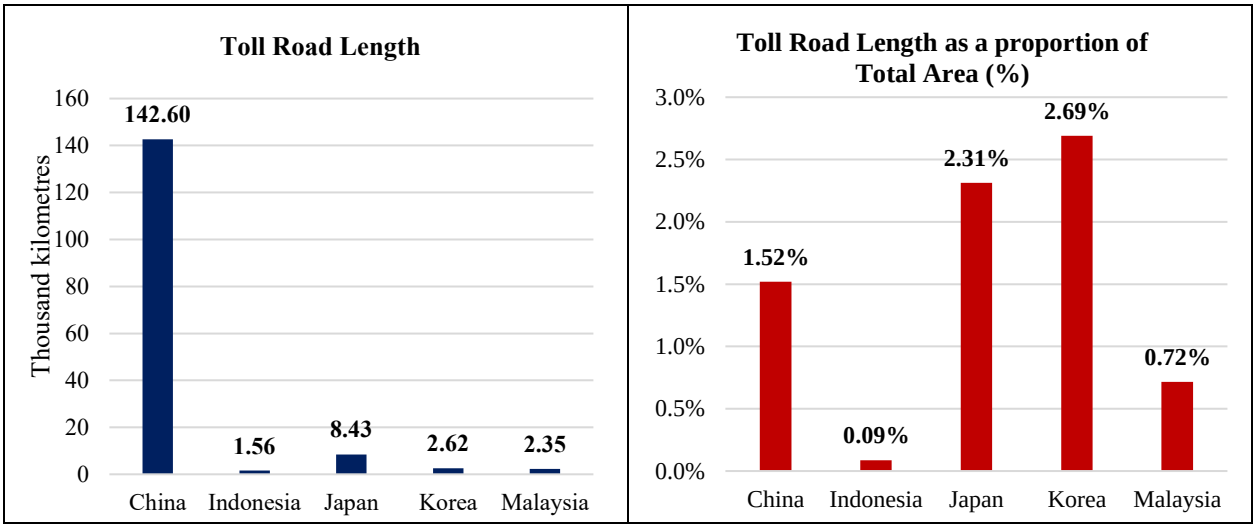
3.2 INVESTMENT NEEDS AND PROJECTED INDUSTRY TRENDS FOR TOLL ROAD SECTOR

Indonesia's toll road infrastructure lags behind other Asian economies. As of July 2019, the total toll road length in Indonesia was around 1,560 kilometres, lower than China at 142,600 kilometres or even Malaysia with 2,350 kilometres (Figure 3.1). On the other hand, the latest ratio of total investment value for transportation including road infrastructure with private participation to GDP

[10] Indonesia Toll Road Authority (BPJT), 'Operated Toll Road', accessed 20 August 2019, http://bpjt.pu.go.id.

in Indonesia was recorded as 0.59 percent, relatively higher than Malaysia (0.49 percent) and China (0.10 percent).[11] This reflects the recent high demand for transportation in Indonesia, including road infrastructure, with traffic demand projected to grow 5 percent each year due to the rise in individual car usage.[12]

Figure 3.1. Toll road length and percentage of toll road to total area among Asian economies



Source:
China: National Bureau of Statistics of China, 'Length of Expressway in 2018', 23 September 2019, http://data.stats.gov.cn
Indonesia: Indonesia Toll Road Authority (BPJT),'Operated Toll Road in 2019', accessed 20 August 2019, http://bpjt.pu.go.id
Japan, Korea, Malaysia: Ministry of Public Works and Housing, Indonesia, 'Public Private Partnership: Toll Road Development in Indonesia' (presented at the *Indonesia Infrastructure Investment Forum*, Korea, 20 September 2017), http://kpsrb.bappenas.go.id/data/filedownloadbahan/1%20BPJT_PPP%20Toll%20Road%20Development%20in%20%20Indonesia%20Rev%20Sept,%2012th%20%2717(Bahan%20Korea).pdf

[11] World Development Indicators, World Bank 2017.
[12] Ministry of Public Works and Housing, Indonesia, 'Public Private Partnership: Toll Road Development in Indonesia' (presented at the *Indonesia Infrastructure Investment Forum*, Korea, 20 September 2017), http://kpsrb.bappenas.go.id/data/filedownloadbahan/1%20BPJT_PPP%20Toll%20Road%20Development%20in%20%20Indonesia%20Rev%20Sept,%2012th%20%2717(Bahan%20Korea).pdf

Table 3.1. Length of road to total area ratio in Indonesia

No.	Province	Operated Toll Road, July 2019 (km)	Total Area (km^2)	Toll Road to Total Area (%)
1	Sumatra	43	480,793	0.01
2	Java	1,489	129,438	1.15
3	Kalimantan	-	544,150	0.00
4	Bali & Nusa Tenggara	10	73,070	0.01
5	Sulawesi	18	188,522	0.01
6	Maluku & Papua	-	497,604	0.00
	Total	**1,560**	**1,913,579**	**0.08**

Source:
Operated Toll Road: Indonesia Toll Road Authority (BPJT), 'Operated Toll Road', accessed 20 August 2019, http://bpjt.pu.go.id.
Total Area: Ministry of Public Works and Housing, Indonesia, *Buku Informasi Statistik 2017* [Statistical Information Book 2017] (Jakarta: Ministry of Public Works and Housing, 2017), https://setjen.pu.go.id.

Looking deeper, the provision of toll road is not yet at an optimal level with Indonesia's proportion of toll road length to total area at only 0.08 percent. Table 3.1 reflects the adequacy of the provision of toll roads in specific regions. Among the provinces in Indonesia, the lowest proportion of toll road length to area is in Kalimantan, Maluku and Papua; while toll road capacity in Java is extremely developed. The provinces with low toll road coverage need infrastructure development for better accessibility and connectivity. However, long travel times and chronic road congestion are also significant drivers of the need for more toll road infrastructure in Java and Sumatera. If these investment needs are not met with adequate solutions, worsening traffic and poor connectivity will have a negative impact on economic activities in Indonesia, resulting in slower economic growth.

The government is fully aware of the high yet unfulfilled demand for national roads and they have been working intensively to establish road infrastructure planning studies, including for toll roads; particularly since the Jokowi-JK government. The data released by the Toll Road Authority show that there will be another 4,555 kilometres of toll road projects between 2015 and 2025. Both direct and indirect investment, in the form of additional equity in toll road operators, continues to increase slightly as a result of the government's persistence in boosting road connectivity. Looking ahead, high demand for toll roads has to be combined with an unceasing focus towards implementing PPPs in infrastructure projects. The toll road industry is expected to remain an attractive investment destination in the coming years.

Table 3.2. Total operated and projected toll road until 2025

No.	Province	Operated Toll Road, July 2019 (km)	Remaining Programme 2015–2025 (km)	Total Projected Toll Road in 2025 (km)
1	Sumatera	43	2,822	2,865
2	Java	1,489	1,326	2,815
3	Kalimantan	-	99	99
4	Bali & Nusa Tenggara	10	219	229
5	Sulawesi	18	89	107
6	Maluku & Papua	-	-	-
Total		**1,560**	**4,555**	**6,115**

Source:
Projected Toll Road: Indonesia Toll Road Authority (BPJT), 'Toll Road Investment Opportunity in Indonesia', 2016, http://bpjt.pu.go.id.
Latest Operated Toll Road: BPJT, 'Operated Toll Road', accessed 20 August 2019, http://bpjt.pu.go.id.

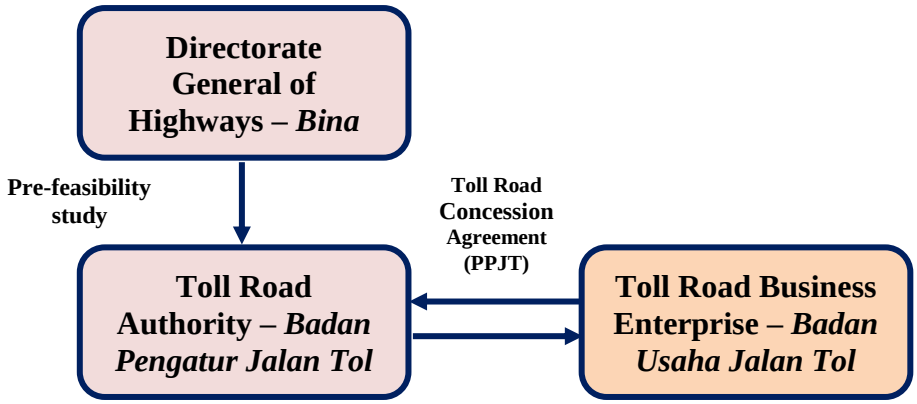
3.3 THE TOLL ROAD SECTOR: INSTITUTIONAL AND LEGAL FRAMEWORK

The development of the toll road sector still lacks attention, occupying the middle in terms of priority among infrastructure projects or assets. It is not easy for the toll road sector to maintain the same level of profits as projects with high financial feasibility such as the Palapa Ring internet infrastructure.[13] Despite this being the case, toll roads enjoy greater financial feasibility as compared to the water or public street lighting sector. Development of the toll road sector comes under Government Regulation no. 43/2013 on the second amendment to Government Regulation no. 15/2005 on toll roads; while the regulation of the toll road authority is specified by the Ministry of Public Works and Housing Regulation no. 43/PRT/M/2015 on the toll road authority.

The transition from Jasa Marga to BPJT as the GCA in 2004 has led to several improvements. The move away from requiring one agency to perform dual roles has led to clearer delineation of roles between the different institutions. Besides BPJT as the GCA, there are now at least two other agencies related to PPP toll road projects, namely, Bina Marga and the toll road business enterprise (BUJT). While BPJT is responsible for executing the bidding process, and acting as the GCA, Bina Marga initiates and designs the toll road projects. BUJT is the toll road operator, with the responsibility of planning, building, operating and maintaining toll road projects. The operation of the toll roads can be carried out by either a state-owned enterprise (SOE) or a private entity. Among these agencies, Bina Marga ranks highest, and is directly supervised by the Minister of Public Works and Housing. As such, this agency has a central role in toll road development, and is involved in initiating, preparing, selecting and evaluating all toll road development plans.

[13] The Palapa Ring is one of the government's infrastructure priority projects in the telecommunication infrastructure sector as stated in Presidential Decree no. 3 in 2013. The total project investment of IDR 7.7 trillion is funded by one of the PPP schemes, i.e., availability payment. The Palapa Ring project involves the development of a fibre optic communication network backbone for Indonesia's telecommunication system, connecting municipalities and regions with quality broadband access.

Figure 3.2. Institutions related to PPP toll road projects



Source: LPEM FEB UI assessment.

Once the planning study has been completed by Bina Marga, the preparation of toll road projects is handed over to BPJT which is both the regulator as well as the GCA in toll road projects. BPJT's authorities include developing toll road regulations, giving recommendations on tariff adjustment to the Minister of Public Works and Housing, and taking over toll roads at the end of their concession period. BPJT also has a role in project preparation, particularly during the bidding process. In the operation and maintenance period, BPJT is responsible for monitoring, evaluating and supervising toll road quality. Unlike other infrastructure project sectors such as the water sector where there is a different GCA for each project, there is only one (central level) GCA for toll road projects. This centralised governance arrangement has helped reduce the bureaucratic complexity in toll road projects and the likelihood of regulatory disputes between stakeholders in roads at the central and regency levels. BPJT as a GCA, also engages directly with the BUJT, the toll road operator, through a toll road concession agreement (PPJT).

3.4 APPLICATION OF PPP IN TOLL ROAD PROJECTS

Implementation of toll road investment in Indonesia could be divided into several types, generally categorised based on the initiator and the availability of financial support. A project can be initiated by the government (known as a solicited project) or directly from the potential operator or BUJT (known as an unsolicited project). Another notable scheme is the direct appointment method, whereby the government assigns projects to the operator without going through the tender process. Projects assigned directly by the government usually have low financial feasibility, but are still economically viable. This scheme has helped the government to further accelerate the development of toll road infrastructure, specifically road projects with relatively low projected demand. Government contributions are one source of funding in direct assignment projects that would alleviate the burden on the operators. Based on the financing scheme, development in toll roads could be developed through two schemes: PPP-KPBU with government assistance or PPP-KPBU without government assistance (e.g., Cipali toll road). Both schemes can use the PINA scheme to accelerate the financial close.

Table 3.3. Comparisons of toll road projects under different investment schemes

	Opportunities	Challenges
Solicited PPP	Certainty of the project because it is initiated directly by the Ministry of Public Works and Housing	Project designs are prone to changes since it only covers less than 50 percent of the overall project plan
Unsolicited PPP	Better coverage of the design since it is directly planned by the technical team from the potential operator	Less market awareness of unsolicited project over solicited
Direct Appointment	Faster preparation and negotiation period	Lack of readiness or preparation of SOEs to construct and operate toll road infrastructure since they did not go through a bidding process Adverse selection bias leads to efficiency challenges
Solicited and Unsolicited PINA	Innovative infrastructure financing that helps the government to develop national infrastructure plan amid a limited government budget	Investment scheme using PINA has not been implemented effectively as market is still unfamiliar and limited supporting regulation

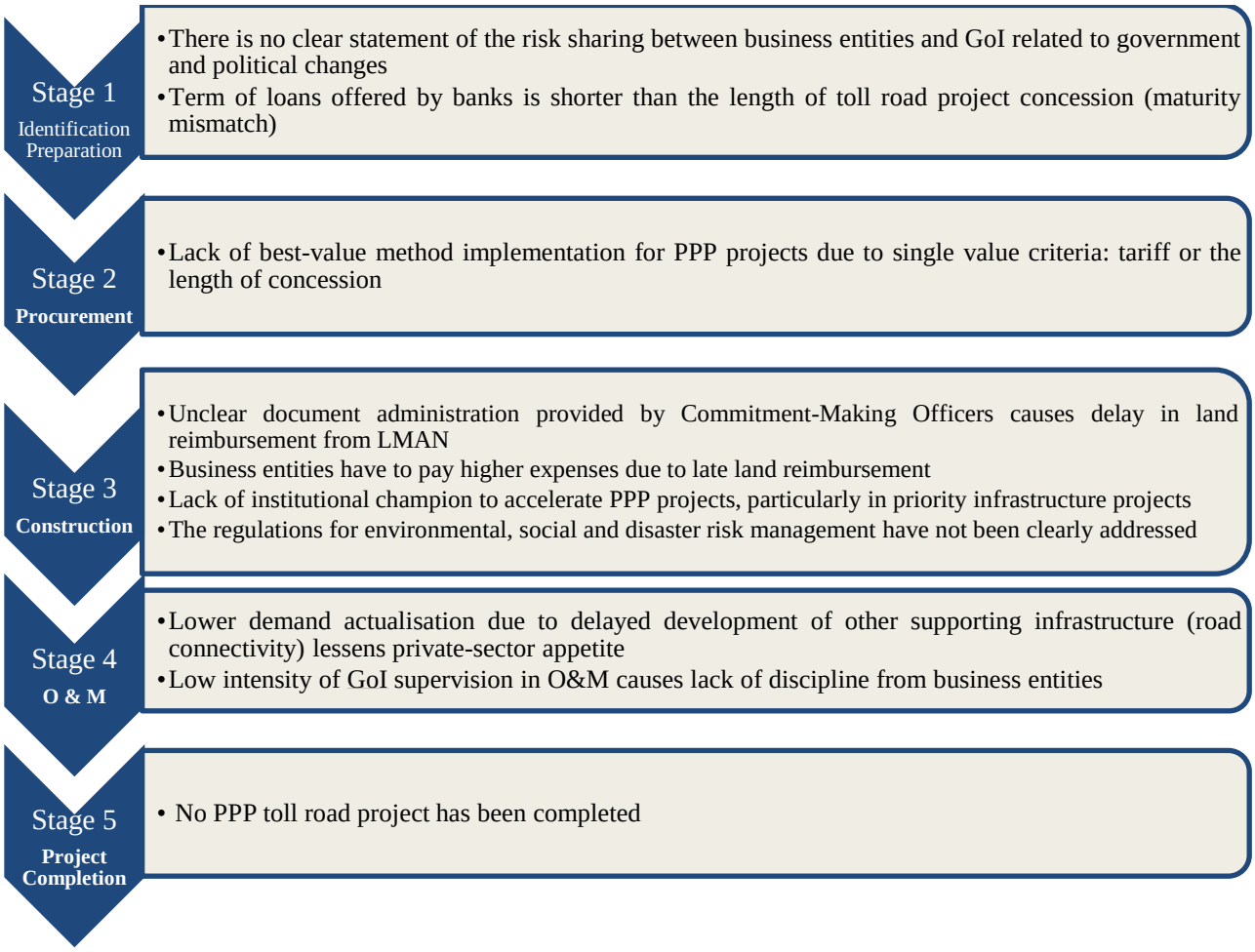
PPP=public–private partnership; SOE=state-owned enterprise
Source: LPEM FEB UI assessment.

The solicited PPP scheme is the most frequently used method in toll road projects, while there are as yet no operating unsolicited projects. The direct assignment method has only been carried out on two projects, namely, the Trans Sumatra toll road with Hutama Karya as the operator and Sukabumi-Padalarang toll road with Waskita Toll Road and Jasa Marga as the operators. Each type of investment has its own opportunities and challenges as can be seen in Table 3.3.

Despite the challenges, PPP implementation, both solicited and unsolicited, is driven by the sharing of financial burdens. However, unlike water projects that have used VGF and PDF, toll road projects under PPP-KPBU agreements have been facilitated solely by financing guarantee from the IIGF. This is because toll road projects still enjoy high economic feasibility with enough potential benefits for the operators.

In the case of PPP-KPBU without government support, such as the nine Trans-Java toll roads under concessions led by Waskita Toll Road, financial assistance was obtained through the PINA scheme. Although the scheme was not implemented effectively due to its being new, several Trans-Java sections, namely Semarang-Batang, Solo-Ngawi and Ngawi-Kertosono-Kediri have managed to obtain additional equity (limited equity fund, or RDPT) from Indonesia's Financial Services Authority through PT Jasa Marga (Persero) as the parent company. Nevertheless, PINA still needs to improve to provide more funding alternatives for toll road projects.

Figure 3.3. Issues in toll road projects, by development stages



GoI=Government of Indonesia; LMAN=State Asset Management Agency; O&M=operation and maintenance; PPP= public–private partnership
Source: LPEM FEB UI assessment.

Similar to other infrastructure projects, the construction of toll roads happens in five stages, starting from preparation and through project completion. The implementation of investment schemes at each stage cannot be separated from various issues and constraints as illustrated in Figure 3.3. As can be seen, most of the issues are seen at the identification and preparation stage due to lack of regulatory clarity related to governmental and political changes.

Beyond that, funding is also a major topic in toll road project development, particularly the high loan interest expense. There is also the maturity mismatch between a bank's loan scheme and the toll road investment, where the bank's loan term is shorter than the length of the concession for the toll road project. That means operators need to pay off the loan before their investment is fully returned. Another issue is the delay in reimbursement of land acquisition fees due to the lack of clarity during the processing of documents by the Commitment-Making Officer, which has led to higher interest expenses. The interest will be even higher if the operator comes from the private sector; local banks tend to quote higher interest rates to the private sector compared to SOEs, as

they view SOEs as a government agency. The lack of clarity on regulations and investment agreements coupled with the lack of trust shown by local banks toward private entities have contributed to more SOEs in toll road projects compared to private entities.

Above all, with respect to the governance framework, the lack of awareness of PPP seems to be the underlying reason for major issues arising within certain agencies. Stakeholders such as BPJT, Bina Marga and local banks bring different perspectives, which have resulted in difficulties and barriers for private entities, which in turn hampers investment. First, unreliable rules and procedures might lower private-sector appetite for the toll road sector as this could limit the rate of return for investors. Second, the partiality of the government and local banks toward SOEs (over private entities) deters private participation. Third, administrative inefficiencies during land acquisition, in document processing as well as reimbursement, may reduce the interest of entities in the investment.

4. CLEAN WATER DEVELOPMENT IN INDONESIA

4.1 OVERVIEW OF THE SECTOR

Indonesia's vision was to meet the Millennium Development Goal targets for water supply by the end of 2019. However, Indonesia has reached only around 70 percent of the target to date. The forecasted budget allocation for this sector still leaves a substantial funding gap, suggesting a need for private sector funding or even other potential sources such as multilateral agencies. The government is expected to place greater focus on clean water supply system (SPAM) projects after having dealt with massive development in the area of sanitation in previous years. To meet the high demand for clean water, support from the private sector and bilateral and multilateral sources is crucial.

The government has also signalled its interest to provide funding support for water infrastructure projects through the project development facility (PDF) and viability gap fund (VGF), both of which have been implemented within the water sector, specifically for SPAM development. SPAM development has a long history, having begun alongside the establishment of PDAM, a regional or district SOE in the water sector, in 1920. Today, SPAM is categorised as one of Indonesia's strategic projects, with priority for development at the regional level in line with the decentralisation stipulated in the relevant regulation since 1998. This gives each region the mandate to engage in SPAM development based on their local clean-water needs.

SPAM is managed by PDAM, which aims to distribute clean water to residential consumers. In return for the service, users pay a tariff regulated by the government which varies by region. This is adjusted according to customers' ability to pay; the lowest rate should not exceed 4 percent of the minimum wage according to Ministry of Home Affairs Regulation no.71 of 2016.

The development of SPAM has been carried out using two investment partnership mechanisms of PPP, namely, cooperation between the government and business entities (KPBU) and business-to-business (B-to-B). A mechanism is deemed a KPBU if the partnership process requires both fiscal and non-fiscal support from the central government and/or regional government. For the other mechanism, the B-to-B scenario, the project does not require either fiscal or non-fiscal support from the government due to its high return (Ministry of Public Works and Housing Regulation no. 19 of 2016). Furthermore, under the B-to-B scheme, the parties involved must agree that the overall financing and all risks of the partnership are to be borne only by the parties involved in the collaboration. SOEs can also be involved under the B-to-B scheme.

Even though KPBU differs from B-to-B in SPAM project development, the implementation process, from preparation and procurement up to transaction, is likely similar. The government has begun to be increasingly ambitious in developing SPAM using PPP-KPBU schemes. This is seen with several projects in the water sector – SPAM Umbulan, SPAM Lampung, SPAM Semarang Barat and SPAM Pekanbaru – all of which are categorised as National Strategic Projects (PSN).

4.2 INVESTMENT NEEDS AND PROJECTED DEMAND FOR CLEAN WATER SECTOR

The period 2009–2015 was intended to serve as a transition from predominantly centrally funded local water infrastructure programmes to mostly locally funded ones. Over the period, the government undertook the largest investment programme in water supply in the last 20 years to reach the Millennium Development Goal for increasing access to a sustainable source of safe water by 2015. But as of 2011, regional government funding of urban water infrastructure programmes still lags well behind annual targets (in funding as well as coverage) and recent investment in the urban water sector has not kept pace with population growth or depreciation rate of its assets.

Most of the clean water in Indonesia today is supplied through piped water (around 60 percent), spring water (25 percent) and ground water (15 percent). Based on the Ministry of Public Works and Housing, Java and Bali, home to about 62 percent of Indonesia's population, have the highest demand for clean water (see Table 4.1). Unfortunately, Java and Bali have suffered water deficits during the dry season since 1990. While there is a crisis in the availability of clean water, it is still a basic need that everyone should have access to. Water availability in general remains the same as the majority of water comes the precipitation. However, water availability is on the decline considering the growth of the population and the rising demand in recent years (Table 4.2). Clean water is also important for various functions, and need to be allocated properly for domestic demand, irrigation and industrial needs.

Table 4.1. Demand and availability of water across regions in Indonesia

No.	Province	Demand for Clean Water (million m^3/year)				Availability of Clean Water (million m^3/year)			
		Rain season	Dry season	Total	Percentage of national (%)	Rain season	Dry season	Total	Percentage of national (%)
1	Sumatera	8,319	11,646.7	19,965.7	18	384,774.4	96,193.6	480,968	25
2	Java & Bali	26,432.9	38,406.1	65,839	59	101,160.8	25,290.2	126,451	7
3	Kalimantan	2,040.8	2,857.2	4,898	4	389,689.3	167,009.7	556,699	28
4	Sulawesi	6,433.3	9,006.7	15,440	14	129,400.2	14,377.8	143,778	7
5	Nusa Tenggara	1,440	4,320	5,760	5	37,940.4	4,215.6	42,156	2
6	Papua	57.2	80	137.2	0.1	381,763.9	163,613.1	545,377	28

Source: PT Sarana Multi Infrastruktur (SMI), 'Insight SMI 2017 2nd Quarter: Water Resources' (Jakarta: PT SMI, 2017), 2, https://www.ptsmi.co.id/wp-content/uploads/2018/09/SMI_Insight_Q2_2017_ENG.pdf

Population data are important for projecting water demand. In general, households in urban areas demand around 120 litres/day/capita, while demand from households in rural areas is only half that at approximately 60 litres/day/capita.[14] According to the Central Agency on Statistics (BPS), Indonesia's population will likely increase to approximately 305.6 million people by 2035. As a

[14] PT Sarana Multi Infrastruktur (SMI), 'Insight SMI 2017 2nd Quarter: Water Resources' (Jakarta: PT SMI, 2017), https://www.ptsmi.co.id/wp-content/uploads/2018/09/SMI_Insight_Q2_2017_ENG.pdf

result, this is expected to further intensify he demand for water, to reach 11.15 billion cubic metres by 2035.

Table 4.2. Projection of water availability per capita (in cubic metres per capita per annum)

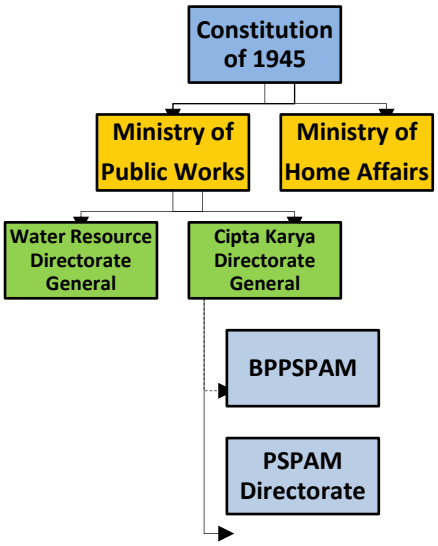
No.	Province	2020	2025	2030	2035
1	Java	1,227	1,178	1,142	1,118
2	Bali & Nusa Tenggara	3,987	3,766	3,582	3,429
3	Sumatera	12,437	11,733	11,192	10,774
4	Sulawesi	12,391	11,751	11,251	10,866
5	Kalimantan	60,108	55,744	52,326	49,611
6	Maluku & Papua	130,315	120,256	112,203	105,700

Source: Central Agency on Statistics (BPS), Indonesia; Natural Resources Directorate, Ministry of Public Works and Housing of Indonesia

4.3 THE CLEAN WATER SECTOR: INSTITUTIONAL AND LEGAL FRAMEWORK

In Indonesia, the development of clean water is regulated by the Constitution of 1945 together with regulations issued by the Ministry of Public Works and Housing and the Ministry of Home Affairs. The Ministry of Public Works and Housing includes the Natural Water Resources Department overseen by the Natural Resources Directorate, the PSPAM Directorate under the Cipta Karya Directorate, and the Support Agency for Water Supply Development (BPPSPAM). The Ministry of Public Works and Housing is responsible for developing SPAM infrastructure and maintaining the credibility of PDAM as the municipal or district waterworks agency. It is also responsible for providing an overview of the demand and availability of water. Meanwhile, the Ministry of Home Affairs is responsible for regulating the water tariff and minimising disputes in regional government since SPAM projects are developed under the decentralisation policy.

Figure 4.1. Governance in the clean water sector

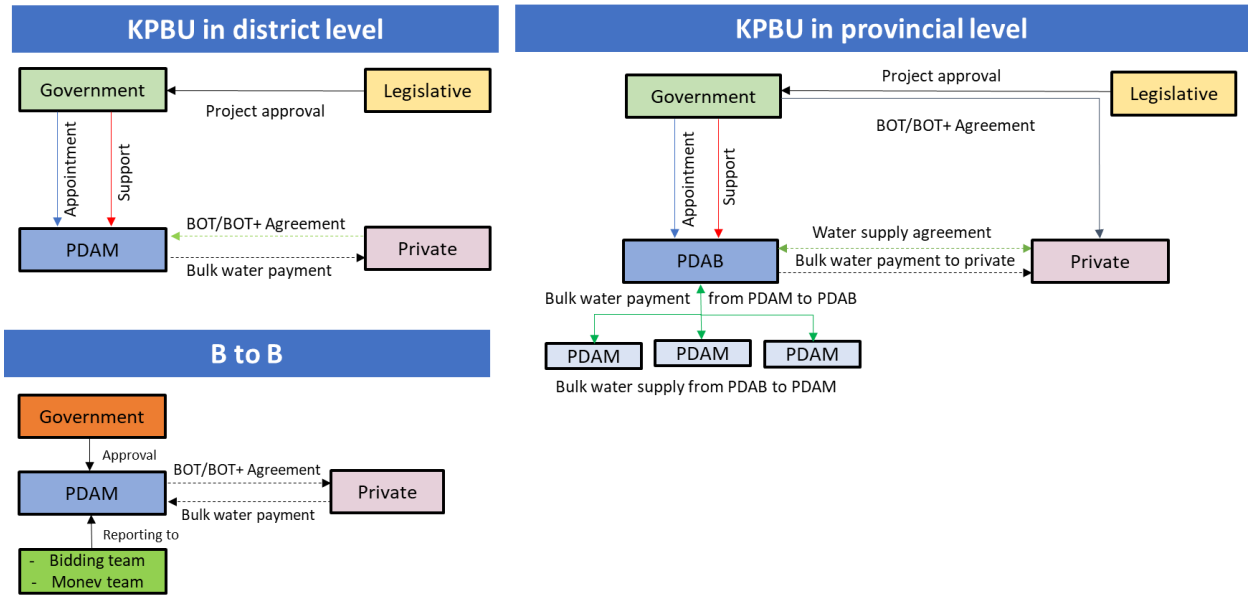


BPPSPAM=Support Agency for Water Supply Development;
PSPAM= Water Supply Development Directorate
Source: LPEM FEB UI assessment.

Partnerships in the water sector can sometimes be wrongly defined as privatisation. For this reason, the government stipulates that private companies involved in clean water development cannot fully own the assets in the project and they cannot operate the infrastructure by themselves. To encourage the implementation of public–private partnerships (PPP) in the water sector especially in developing SPAM, the government has issued various supporting regulations, including: (1) Government Regulation no. 121 of 2015 related to water resources; (2) Government Regulation no. 122 of 2015 related to clean water supply systems; (3) Presidential Regulation no. 38 of 2015 concerning PPP in infrastructure development; (4) BAPPENAS Regulation no. 4 of 2015 about procedures for implementing PPP; (5) Regulation of the Chief of the National Public Procurement Agency (LKPP) no. 19 of 2015; (6) Regulation of LKPP no. 29 of 2018 concerning procedures for implementing procurement in PPP schemes; and (7) Government Regulation no. 54 of 2017 about regional-owned enterprises (BUMD).

Since the implementation of decentralisation in Indonesia, clean water infrastructure development involves district and provincial governments as the authority and GCA. The roles and institutions involved can differ from one project to another, depending on the coverage of project. There are at least four agencies responsible for SPAM project development, namely: (1) the regional government as the GCA; (2) PDAM or PDAB, respectively the district and provincial waterworks; (3) the regional house of representatives; and (4) the private sector as a business partner. There are two main forms of PPP in clean water provision: KPBU and B-to-B.

Figure 4.2. Institutions related to clean water infrastructure



Source: LPEM FEB UI assessment.

The B-to-B scheme is the most common partnership contract implemented for the clean water provision sector. A B-to-B partnership involves only two parties: PDAM as the contracting agency and a private firm as the contractor. It is called B-to-B because the agreement is conducted between two business entities, where PDAM is considered to be a business entity that represents the government in this contract. Compared to the KPBU scheme, a B-to-B investment is smaller and

aims to develop only a few parts of a project, for example, the construction or installation of pipe sections or a water treatment plant.

On the other hand, KPBU offers a more comprehensive partnership scenario. Mainly, this form of PPP is employed when a project is considered to be complex, with a high amount of investment required and the project is not financially viable, that is, when there is a need for government support to overcome those factors. This type of PPP involves several agencies: the regional government, regional legislators, the regional-owned business entity (PDAM or PDAB) and business entities.

The regional government has the highest responsibility under this scheme. If a project involves more than one district or city, the governor will be responsible as the GCA from the regional government. If only one district or city is involved, the mayor is responsible for the development of the project. Meanwhile, in relation to the municipal agencies, if a project covers more than one district, PDAB is the agency responsible for signing an agreement with the governor. If a project belongs to a specific area or district, PDAM is the agency responsible for signing an agreement with the mayor. Last is the business entity that becomes the operator, which is selected through a bidding process. The business entity could be a private corporation or a government enterprise, either a state-owned enterprise (SOE) or a regional-owned enterprise (ROE). This business entity is the one that builds the transmission pipeline and/or water treatment plant. Under the PPP, the agreement is in concession form, where the private agency will build and operate the infrastructure for some specific length of time, and would be obliged to transfer it to PDAM or PDAB once the concession is over.

4.4 APPLICATION OF PPP IN CLEAN WATER PROJECTS

Investment in clean water projects in Indonesia spans several types, generally based on the initiator and the availability of financial support. Unlike toll road projects, unsolicited SPAM projects are initiated by regional governments. In terms of financing, SPAM projects could be developed using PPP with government assistance such as PDF and VGF, or without government assistance through the B-to-B process.

As in other sectors, organisational structures in the water sector vary widely. Given the non-competitive nature of the sector and the importance of sunk costs due to the very long lifespan and specificity of the assets, the ability of governments to commit to efficient prices over long enough periods to allow for full cost recovery is problematic. In particular, the high ratio of fixed to variable costs makes the government's ability to offer a credible price a significant problem. This problem is compounded by the specificity of the sector's political economy. First, the sensitivity of the water issue to public opinion is likely to exacerbate pressures to push prices way below the full cost recovery level. Second, the difficulty in observing the state of the physical network (mostly underground pipes) opens the possibility for operators to underinvest in maintenance, thereby extracting additional rents from the system. Third, the risk of regulatory capture by the operators themselves is also non-negligible.

Table 4.3. Comparisons of different investment schemes used in SPAM PPP projects

		Opportunities	Challenges
Solicited	KPBU	• Receive GoI support • Clearer risk sharing	• Potential for problems due to more complex governance • Lack of GCA knowledge • Immature regulations
	B-to-B	• High IRR • Less complex • Financially viable • Commonly used	• No GoI support • Less transparency and openness at the preparation stage
Unsolicited	KPBU	• Better initial design • Receive GoI support	• Unattractive project • Underdeveloped guidance
	B-to-B	• More innovative design • More efficient project • Mature regulation	• No GoI support • Different GCA regulations • Less transparency at the preparation stage

B-to-B=business-to-business; GCA=government contracting agency; GoI=government of Indonesia; IRR=internal rate of return; KPBU=cooperation between the government and business entities; PPP=public–SPAM=Clean Water Supply System
Source: LPEM FEB UI assessment.

Generally, B-to-B is the most favoured option in developing SPAM projects. B-to-B usually covers partnerships in production units. Examples include SPAM Ciawi, SPAM Cisadane, SPAM Serang, SPAM Subang and SPAM Tangerang. Investors are attracted by the high rate of return and the modest amount of investment required. Nevertheless, there are examples of SPAM development using KPBU, for example, SPAM Umbulan, SPAM Lampung and SPAM Semarang Barat. Each type of investment has its own opportunities and challenges as seen in Table 4.3. As with toll road projects, the use of PPP schemes in SPAM development, both solicited and unsolicited, is driven by the sharing of financial burdens. Government support through PDF and VGF may increase the internal rate of return (IRR), making the project more financially viable. Guarantees by IIGF also increase the attractiveness of PPP in SPAM project development.

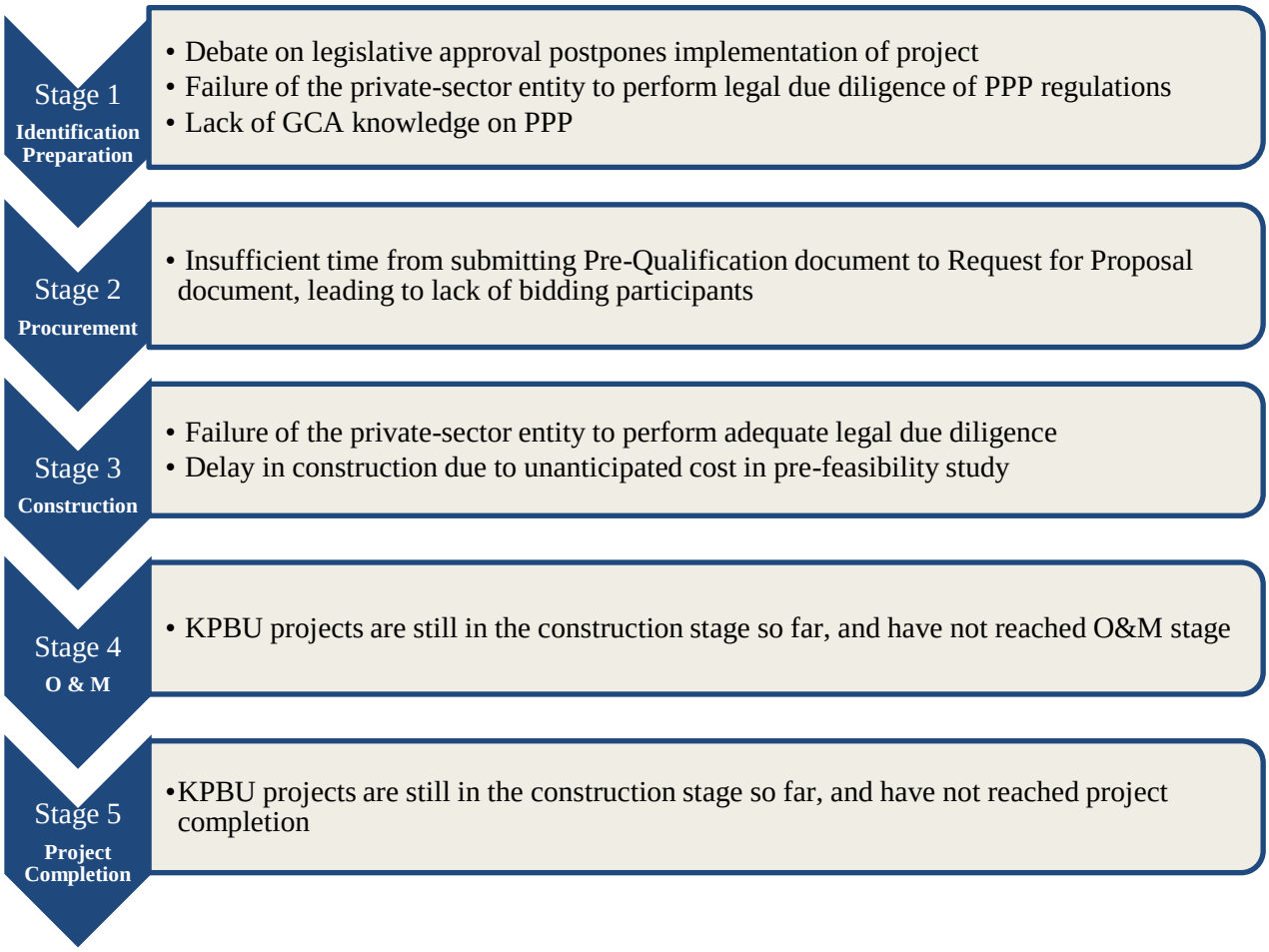
Various areas may be covered in a PPP agreement to develop a SPAM project, including raw water (installation of a water treatment plant, as well as its operation and maintenance) and production of bulk water. However, the distribution of water to consumers can only be done by PDAM. There are two types of partnership associated with KPBU in SPAM development: build–operate–transfer (BOT) and BOT plus. BOT ties the private firm to an agreement to act as an operator in the production of bulk water and/or includes installation of the water treatment plant. BOT plus includes an additional agreement to build transmission pipelines for distribution; but the firm's role is limited to construction and does not extend to distribution.

As stated in Figure 4.3, there are issues found in the development of SPAM infrastructure using PPP. These commonly occur in the first stage, that is, during the identification and preparation of a project. Due to the complexity of developing SPAM projects using PPP, a good understanding of a project is required right from the beginning. There are cases where the government does not have the same view on a project especially when the project uses availability payments and if it is related to a permit. Such differences hamper the progress of the project to the next stage. With

projects being developed at the local level, difficulties may come from GCAs from different regions having a range of understandings on the PPP.

More specific issues like construction delays or uncertainty in contracts are likely to be minimised in the future. The government has done comprehensive studies that could serve as a foundation for preventing these problems. One idea from the government is to create a Datamart containing related data and regulations for project development. It is anticipated that this could minimise faults and mistakes during project calculation, especially those related to risk and expenses.

Figure 4.3. Issues in SPAM projects, by development stage



GCA=government contracting agency; KPBU=cooperation between the government and business entity; O&M=operation and maintenance; PPP=public–private partnership;
Note: To date, the farthest stage reached by any clean water PPP project is the construction stage. Examples include SPAM Umbulan, SPAM Lampung and SPAM Semarang Barat.
Source: LPEM FEB UI assessment.

5. DEFINING INFRASTRUCTURE QUALITY

5.1 REVIEWING PPP REGULATIONS IN INDONESIA BASED ON APEC QUALITY OF INFRASTRUCTURE PRINCIPLES

Basically, PPP regulation in Indonesia has considered to some extent the quality of infrastructure in PPP implementation. Yet, as this review highlights, there is still room for improvement. The extent to which PPP implementation in Indonesia is aligned with the APEC Guidebook on Quality of Infrastructure Development and Investment[15] principles is described below.

1. Alignment with development strategy and the principles of openness, transparency, economic efficiency and fiscal soundness

PPP regulations in Indonesia have clearly set out that in identifying and selecting projects, the project should comply with the central/local medium-term development plan and align with the fiscal capability of the central government or regional government. Next, the outline business case should provide information on optimal risk allocation as well as certainty on whether government support and/or a government guarantee are required. Also, as part of this transaction, the non-winning bidders should be given the opportunity to clarify issues to ensure openness.

However, there is room for improvement. First, there is still a lack of alignment between VGF criteria and the National Public Procurement Agency's (LKPP) regulation regarding the best value method. Projects receiving VGF are required to use the knockout system with minimum public assistance in the evaluation phase; thus, a project's winning bid is determined only by a detailed service requirement or output specification, and a minimum price or minimum government support (VGF). This requirement is not in compliance with the best value method. There is an urgent need for greater focus on incorporating value for money (VfM) measurement to ascertain a project's life cycle cost. There is currently a move to implement the two-stage bidding method (to meet the output specification and VfM assessment) for PPP. Second is the need for e-procurement mechanisms. Currently, LKPP has implemented an e-procurement mechanism for government procurement, yet the system has not been applied to PPP projects. Third is the need to increase the willingness of the government to provide VGF to sectors that have economic and social impact (beyond the clean water sector). Last is to provide more hybrid or blended financing for less lucrative PPP projects, like the special allocation funds (DAK) seen in the Umbulan water supply project.

2. Integration of disaster proofing, welfare for the neighbourhood and region, as well as standards on resilience to natural disaster, into the design and construction of the projects

The PPP regulations do not clearly describe these issues. The relevant regulation explicitly describes the safety issue only, stipulating that risk management should be considered when

[15] APEC, *APEC Guidebook on Quality of Infrastructure Development and Investment (Revision)* (Singapore: APEC, November 2018).

preparing the outline business case for the preparation stage. There is a need for enforcement of safety rules and better supervision by the GCA of operation and maintenance.

3. Consideration of economic and financial soundness, in terms of value for money (VfM) and life cycle cost reduction, in PPP projects

The PPP regulations take into account economic and financial soundness, stipulating that PPP projects should be selected based on the VfM principles assessed in the preliminary study by the GCA. The best-value principle needs to be incorporated in VfM measurement. Given the lack of knowledge and skill on public sector comparator (PSC) and VfM, capacity building for the GCA needs to be emphasised.

4. Consideration of social and environmental sustainability

The PPP regulations require that the pre-feasibility study and the preparation of the outline business case should include a study of environmental and social impacts. During the PPP preparation stage, the GCA will perform public consultation to review social and environmental standards, and compliance with the provisions of the laws and regulations in the environmental sector. In addition, the government has enacted Presidential Regulation no. 56 of 2017 concerning the mechanism for overcoming the social impact due to land acquisition for Indonesia's strategic infrastructure projects. Nevertheless, to achieve better quality standards, improvements have to be made on environmental impact assessments and disaster risk management; and there has to be a clear plan for *force majeure* mitigation.

5. Consideration of local resources, conditions, ownership and responsibility

The issues of local resources and ownership and responsibility are not clearly stated in the existing PPP regulations. The need for more balance between local and private sector involvement and ownership in project planning should be addressed. Social impacts should also be assessed.

The overall assessment on PPP implementation in Indonesia based on the five dimensions of 'quality of infrastructure' discussed above is presented in Table 5.1.

Table 5.1. Review of PPP implementation in Indonesia based on APEC Quality of Infrastructure principles

No	Quality Dimension	Assessment	Room for Improvement
1	*Alignment to Policies*	★★★★★	• Conflict between VGF criteria versus LKPP's regulation regarding best-value method (two-stage bidding)
	Openness and Transparency	★★★★	• The need for e-procurement mechanism
	Fiscal Soundness	★★★★★	• Increase the willingness of GoI to provide VGF in practice to other sectors that have bigger economic and social impact • Provide more hybrid or blended financing (such as the special allocation funds (DAK) in Umbulan clean water supply)
2	*Stability, Safety, Resiliency*	★★★★	• Better supervision by GCA on operation and maintenance • Enforcement of safety rules needs to be strengthened
3	*Economic and Financial Soundness*	★★★★	• Best-value principle needs to be incorporated in VfM measurement
4	*Social and Environmental Sustainability*	★★★	• Improvement in EIA and disaster risk management • Clear plan for *force majeure* mitigation
5	*Local High-quality Development*	★★★	• Need more balance between local and private-sector involvement and ownership in project planning • Social impact needs to be implemented and evaluated

1 star=unsatisfactory; 2 stars=less satisfactory; 3 stars=adequate; 4 stars=satisfactory; 5 stars=very satisfactory
EIA=environmental impact assessment; GoI=Government of Indonesia; GCA=government contracting agency; LKPP=National Public Procurement Agency; VGF=viability gap fund.
Source: LPEM FEB UI assessment.

5.2 REVIEWING PPP REGULATIONS IN THE TOLL ROAD AND CLEAN WATER SECTORS BASED ON APEC QUALITY OF INFRASTRUCTURE PRINCIPLES

5.2.1. Toll Road

This assessment reviews regulations in the toll road sector and the development of toll road projects in Indonesia. The following review is based on the APEC Guidebook on Quality of Infrastructure Development and Investment:[16]

1. The alignment with development strategy and the principles of openness, transparency and fiscal soundness.

Plans for toll road infrastructure have been well-designed by the government, through the network development plan from the Ministry of Public Works and Housing, and the economy's medium-term and long-term development plans from BAPPENAS. The plans are aligned to relevant regulations such as the law on roads and the presidential regulation on toll roads. Tenders are also regulated and implemented with openness; there are no limitations placed on the ability of SOEs and private entities to join the bidding process.

[16] APEC, *APEC Guidebook on Quality of Infrastructure Development and Investment (Revision)* (Singapore: APEC, November 2018).

However, there is a room for improvement in the transparency of the procurement process undertaken by the GCA, particularly in providing public access to the bidding result. Another area of concern is in the transfer of the land acquisition risk from toll road business entities to the government, which has become a key driver for increasing private appetite in this sector, especially for toll roads listed in the government's project priorities. This achievement, however, poses a real challenge to fiscal capacity given that the government budget for infrastructure is limited. The government should be more aware of the need to be prudent in its budget allocation for land acquisitions. Along with the State Asset Management Agency (LMAN), the government could be more active in finding alternative source of funds such as through re-utilising state assets.

2. Stability, safety and resiliency.

Even though there is no specific regulation related to stability, safety and resiliency in infrastructure, toll road business entities have been comprehensive in accounting for (in their technical design plans) the stability and safety indicators in the construction phase. In the operation phase, road safety is already regulated and roads are maintained based on minimum service standards. However, the quality of existing toll roads is highly dependent on the business entities' commitment as there is no binding and frequent supervision by the government, only an evaluation of minimum service standards every six months. Other risks related to sudden natural disasters and unforeseen events are also not yet regulated.

3. Consideration of economic and financial soundness, in terms of cost-effectiveness including life cycle costs and utilisation of markets.

Toll road projects are already regulated and implemented effectively in terms of economic as well as financial feasibility; and the investment cost of a project takes into account all the phases of toll road infrastructure development. Both the Ministry of Public Works and Housing and the Ministry of Finance have provided a range of government support to accelerate project implementation. Various financing instruments for toll road business entities' financing such as syndicated loans from banks; corporate bonds; limited participation funds; and asset-backed securities are also available to toll road business entities. However, VfM and PSC assessments have not been implemented properly in the toll road planning process. Bina Marga as well as the Indonesian Toll Road Authority (BPJT) are still suffering from the lack of information regarding VfM and PSC. They follow BAPPENAS's lead in deciding on a list of PPP projects, when they should be developing their own list.

4. Consideration of social and environmental sustainability.

The responsibility of toll road business entities to conduct environmental impact assessments (known as AMDAL in Indonesia) is specified in existing toll road regulations but implementation has fallen short due to lack of GCA supervision. Also, social impacts in the local community have not been addressed explicitly in the regulations, which means that the business entities involved use their own guidelines and approaches. If the government continues to leave the lack of standardised regulations unaddressed, there is potential for social injustice and disputes.

5. Consideration of local resources, conditions, ownership and responsibility.

The construction and operation of toll road projects have not complied with specific regulations related to the minimum level of local resource use in infrastructure. However, the toll road business entities are willing to employ more locals as long as they are financially competitive compared to experienced workers in developed cities. For upcoming projects, the government should regulate and monitor the business entities' commitment to provide for local needs. This is an efficient way to build more balance between local and private sector involvement in project planning.

Table 5.2. Review of PPP implementation in the toll road sector in Indonesia based on APEC Quality of Infrastructure principles

No	Quality Dimension	Assessment		Room for Improvement
		Regulation	Implementation	
	Alignment	★★★★★	★★★★★	• Synchronisation of policy and planning
1	Openness and Transparency	★★★★	★★★★	• More open and transparent procurement process • Clearer administration of land acquisition process is urgently needed
	Fiscal Soundness	★★★★	★★★★	• Anticipated budget for land acquisition should be fully addressed
2	Stability, Safety, Resiliency	★★★★	★★★★	• Rules and regulations need to be more binding • The targeted outcome needs to be more standardised for each project • Better GoI supervision of implementation
3	Economic and Financial Soundness	★★★★	★★★★	• Capacity building for GCA (re: PSC-VfM needed)
4	Social and Environmental Sustainability	★★★★	★★★★	• Improvement in EIA and disaster risk management • Social impact needs to be implemented and evaluated • Clear plan for *force majeure* mitigation
5	Local High-quality Development	★★★	★★★	• More detailed regulations should be addressed • Clear commitment to support local needs

1 star=unsatisfactory; 2 stars=less satisfactory; 3 stars=adequate; 4 stars=satisfactory; 5 stars=very satisfactory
EIA=environmental impact assessment; GCA=government contracting agency; PSC=public sector comparator; VfM=value for money
Source: LPEM FEB UI assessment.

5.2.2. Clean water

For the clean water sector, the assessment is conducted to review regulations in the clean water sector and the implementation of SPAM provision in Indonesia based on the APEC Guideline for Quality of Water Infrastructure.[17]

1. Alignment with development strategy and the principles of openness, transparency, and fiscal soundness

Water infrastructure regulation has been developed in a comprehensive manner, with the involvement of a wide range of stakeholders, including the Ministry of Public Works and Housing, the Ministry of Home Affairs, regional government, district water utilities (PDAM) and local

[17] APEC, 'APEC Guideline for Quality of Water Infrastructure' (Singapore: APEC, November 2018).

legislators. The regulation is in line with the presidential regulation that stipulates SPAM as one of Indonesia's project priorities. The bidding process is also transparent. The implementation of VGF is a breakthrough achievement for the water sector. However, regulation related to local employment still remains unclear and refers to the general regulation. The amount of VGF should also be evaluated and there should be a standard calculation. Furthermore, potential problems may occur due to the lack of standardised project planning by the GCAs in the water sector across the various regions.

2. Stability, safety and resiliency

Quality of water is guaranteed by PDAM as the operator based on a Ministry of Health regulation that is in line with United Nations standards. Planning and risk management to provide a stable volume and quality of water have also been implemented. However, risks related to natural disasters, terrorism and unforeseen events, and steps to ensure safety by avoiding and transferring such risks, are not yet being regulated specifically. Regulation to ensure the safety of workers is generally covered under regulation no. 13 of 2003 regarding manpower, which covers protection for workers and work safety.

3. Consideration of economic and financial soundness, in terms of cost-effectiveness including life cycle cost and utilisation of markets

SPAM infrastructure development includes accounting for the value of project investment and cost. The financial impact, including costs over the entire life cycle of a project, is considered in selecting the winner of a project. A variety of financing sources has been used in the operation of such projects, including support from multilateral development banks, other development partners, and private financing in addition to public investment. However, it is not clear the extent to which the planned budgets would match the actual costs of implementation, since the existing projects have not matured yet.

4. Consideration of social and environmental sustainability

The existing water regulation has not yet established provisions to control and reduce the environmental burden, through preserving biodiversity; conserving energy and using renewable energy; and developing systems for materials recycling, energy recovery and water reclamation. The social impacts on the local community have not been addressed explicitly. There is a need to consider the impact of potential facilities with ongoing activities in the region. The infrastructure development plan should cover such impacts and make sure legal due diligence has been performed.

5. Consideration of local resources, conditions, ownership and responsibility

There is no clear regulation related to the minimum local resource that should be employed in water sector infrastructure development. However, the transfer of technologies is no longer an issue since it becomes the obligation of the business entity as operator to make sure that PDAM can manage the project well before the concession is over.

The overall assessment mentioned above is presented at Table 5.3.

Table 5.3. Review of PPP implementation in the clean water sector in Indonesia based on APEC Quality of Infrastructure principles

No	Quality Dimension	Assessment		Room for Improvement
		Regulation	Implementation	
1	Alignment	★★★	★★★★★	• Synchronisation of policy and planning
	Openness and Transparency	★★★★	★★★	• Implementation of bidding needs to be more standardised for each local GCA
	Fiscal Soundness	★★★★	★★★	• Amount of VGF should be reviewed
2	Stability, Safety, Resiliency	★★★★★	★★★★★	• Incorporate various innovations by private enterprise • Improvement in EIA and disaster risk management • Clear plan for *force majeure* mitigation
3	Economic and Financial Soundness	★★★★★	★★★★★	• Life cycle cost has been fully considered • Implementation of various financing sources
4	Social and Environmental Sustainability	★★★	★★★	• More detailed regulations
5	Local High-quality Development	★★★	★★★	• More detailed regulations

1 star=unsatisfactory; 2 stars=less satisfactory; 3 stars=adequate; 4 stars=satisfactory; 5 stars=very satisfactory.
Source: LPEM FEB UI assessment

5.3 THE NEED FOR AN INSTITUTIONAL ENVIRONMENT SUPPORTIVE OF PPP

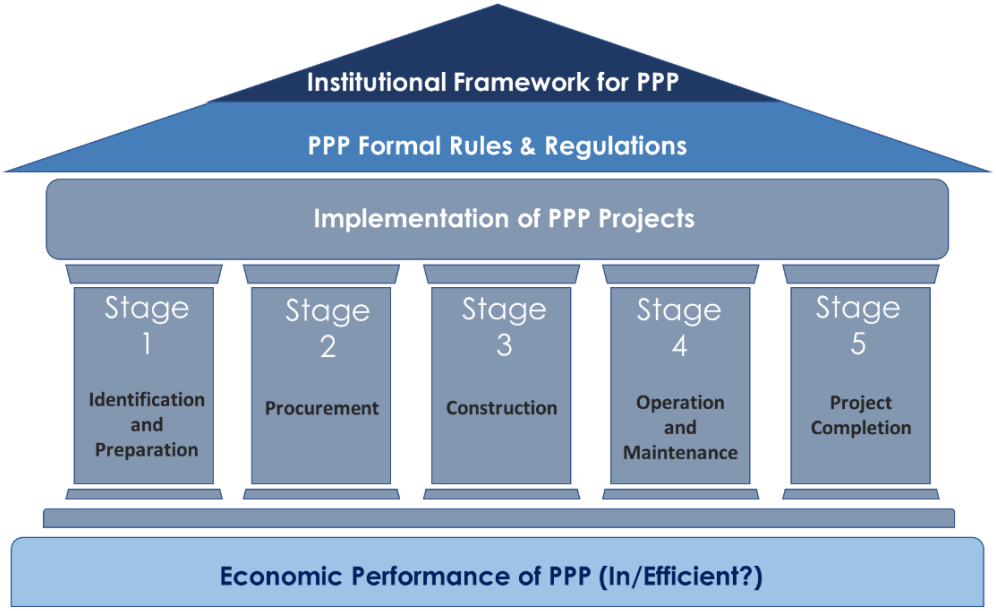
To increase the participation of private firms in PPP projects requires more than regulatory reforms and improvements in PPP governance. What is also crucial is an institutional environment supportive of PPP implementation. Two institutional environments that determine the willingness of the private sector to enter PPP agreements are the institutional environment that support private contracts ('contracting institutions') and the institutional environment that prevent expropriation of productive activity by the government, other private firms and society ('property rights institutions'). According to Acemoglu, support for private contracts include looking into areas such as the legal procedures necessary to resolve a dispute; the procedural complexity in resolving a case of unpaid commercial debt; and the number of procedures necessary to resolve a court case involving this same commercial debt. [18] Institutions that constrain expropriation from government

[18] D. Acemoglu, 'Modeling Inefficient Institutions' (National Bureau of Economic Research, 2006).

or society focus on areas such as the procedural rules constraining government action and the close relationship between property rights institutions and political institutions.

The absence of these institutions would affect the PPP regulatory framework, project implementation as well as project performance. In terms of private participation in infrastructure, the lack of these institutions would impede the private sector, especially foreign private investors, from entering the local infrastructure market. Also, the lack of these institutions would increase the risk of unsettled disputes during the concession. Therefore, the institutional framework for PPP is the umbrella for PPP regulation and implementation. Figure 5.1 describes the relationship between the institutional framework for PPP and their economic performance.

Figure 5.1. Foundation of PPP economic performance



PPP=public–private partnership
Source: LPEM.

The Peer Review team finds that there are aspects that need to be further explored regarding the institutional environment to support PPP. Preliminary findings show that there are issues that need to be considered to accelerate the implementation of PPP in Indonesia, especially in terms of increasing the private sector's appetite to invest in infrastructure.

5.3.1 Contracting institutions necessary for PPP

PPP projects require a set of regulations that support their long-term investment and partnership. The current PPP regulations focus more on the early stage of a partnership: the preparation and transaction of the PPP projects. The government's criteria for successful PPP project implementation remain based on when the project is successfully transacted and reaches a financial close. PPP regulations tend to overlook issues that might arise during contract implementation or project completion. An example is the dispute resolution mechanism. Article 32 of Presidential

Regulation no. 38 of 2015 regarding the preparation of PPP agreements states only that a PPP agreement should contain stipulations that dispute resolution be done in stages, namely, deliberation and consensus, mediation and arbitration/court. There is no regulation providing for a detailed mechanism, thus leaving it up to the parties to a PPP agreement to specify the dispute resolution mechanism.

PPP regulations also fall short on resolving cases of unpaid commercial debt. Currently, the government relies on the government guarantee mechanism through IIGF to take care of any unpaid commercial debt from the public sector. However, a mechanism to settle any debt that is not covered by IIGF is still lacking.

Lastly, resolving disputes arising from PPP projects could be costly. In particular, private investors are concerned about the number of procedures necessary to resolve a court case involving the commercial debt or unsettled disputes. PPP regulations may need to consider the importance of having a simple settlement procedure for the contracting institutions involved in PPP projects. Arbitration through a body such as the BANI Arbitration Center should be preferred to the court; the dispute resolution process would be more efficient, yet still have legal certainty.

5.3.2 Property rights institutions necessary for PPP

Since PPP projects involve a long-term investment, rules and procedures to protect property rights during the implementation and operation of a project are central for private sector participation. Since the land issue is central to PPP projects, the government has made a significant commitment by providing the land for PPP projects to accelerate infrastructure investment and development. It has set up a mechanism for land acquisition financing through LMAN, and this has significantly improved the confidence of the private sector to invest in infrastructure projects.

However, the private sector still faces risks of expropriation due to public distrust over the operation and management of public services by the private sector. For example, the Jakarta provincial government intends to take over the Jakarta clean water project due to public concerns over ‘privatisation’ issue. This problem stems from lack of understanding on PPP, whereby, in general, people equate PPP with privatisation.

The lack of property rights institutions supporting PPP projects is found especially at the local level. Private investors are sometimes subject to excessive regional government regulations, permits and retribution, which may impede the advance of their infrastructure projects. Regional governments may also have an interest in meeting the demands of the local community, even though these may sometimes be outside the scope of the initial project plan. Better coordination with regional governments is needed to anticipate this issue. Another problem is the lack of clear regulations on how private firms could internalise gains made through their own efficiency efforts after a contract is signed. Without such regulations in place, the risk of government expropriation is higher, dampening private-sector appetite to partner with the government in infrastructure development and investment.

5.4 OVERALL EVALUATION: GAPS IDENTIFIED

Based on the above review of PPP regulations, the implementation in toll road and clean water projects, and the readiness of PPP institutions engaged in supporting PPP, there are six major issues that need to be considered in order to create more incentives for private participation in infrastructure development and investment in Indonesia.

5.4.1 Lack of PPP awareness in the government (executive, legislative, and law enforcement officers)

PPP is not yet a familiar concept for the government, especially in the legislative and law enforcement bodies as well as at the regional government level. An understanding of the differences between PPP and (full) privatisation is required for there to be political support for PPP implementation. Legislators need to understand PPP since some projects at the local level require legislative approval for availability payments and other government support programmes. Law enforcement officers and auditors – especially the Corruption Eradication Commission (KPK) and the Finance and Development Supervision Body (BPKP) – need to understand procurement mechanisms specific to PPP such as the two-stage bidding process and the best-value criteria for bidding in order to support their implementation and practice.

In addition, the government needs to understand that PPP incentivises the private sector to enhance efficiency (faster completion, etc.) within the contractual framework. Thus, there is a need to ensure that the private sector can internalise such gains without fearing that the government would attempt to claw back the returns (normalise returns) beyond the PPP agreement. More than that, PPP needs to be viewed as more than a mere financing avenue, but as a professional partnership where the private sector provides value through their innovation and expertise while the government is able to benefit from an expansion in the infrastructure stock.

5.4.2 PPP contracts are permeable to political environment

PPP contracts, like any other public contracts, are vulnerable to changes in the political environment. Thus, a strong commitment from the government, especially the regional government, is needed to encourage private sector participation in infrastructure projects. The mechanism for tariff revisions, for example, not only needs to be secured in the contract, but also needs to be enforced strictly. The reputation of the government is crucial in building private sector trust over PPP in Indonesia.

5.4.3 Land acquisition issues

Land acquisition is still an issue in implementing PPP in Indonesia. While the government has taken responsibility for land acquisition, there have been cases of land disputes with local residents during the preparation stage delaying project implementation. In response, Indonesia established Government Regulation no. 2 of 2012 to address disputes that happen before construction. This regulation stipulates that the maximum time from planning to construction should be 583 days. With delays due to disputes during the construction stage, however, private entities have not been able to avoid having to negotiate with local residents. In addition, incomplete land documents have led to late reimbursements from LMAN on the land acquisition payment made by the private

entities using bailout funds. This imposes additional cost of funds on the private firms, and no regulation has yet specified how the government shall compensate for these costs.

5.4.4 Public distrust over the involvement of the private sector in operating and managing public services (e.g., in clean water)

In Indonesia, there has been growing concern that the operation of public services should be done by the government or at least a SOE, and not by the private sector. There have been a few petitions demanding that the government repurchase companies that have been given concessions to operate in the clean water sector. The public needs to be better informed and educated on PPP related issues.

5.4.5 Partiality shown by local banks toward SOEs

Due to the relationship and political affiliation between SOEs and local banks, SOEs are able to obtain loans with lower rates. This affects PPP procurement: SOEs, with the advantage of lower borrowing costs, can be more competitive compared to domestic private-sector and foreign entities.

5.4.6 Lack of interest in greenfield PPP among foreign investors

Foreign investors are uninterested in greenfield projects because these projects are expensive (as they are still in their early stages and need high investment), carry connectivity risk (the risk that other interlinked projects, e.g., connecting toll road routes, are unable to finish as scheduled) and have significant land acquisition risk.

6. CONCLUSION AND RECOMMENDATION

6.1 CONCLUSION

The main findings from the Peer Review on public–private partnerships (PPP) implementation in Indonesia are described below.

- Efforts to drive purely private firms to participate in infrastructure development and investment in Indonesia should begin by developing a supportive institutional environment for public–private contracting and the enforcement of property rights.

- Although major reforms in the regulatory framework and enhancements in PPP governance have been observed, there is still room for improvement. The challenges are as follows:
  - Decentralisation hampers the approval of PPP projects at the provincial/district level.
  - Reimbursement of land payment remains inefficient both in terms of time and procedure.
  - Unfair risk sharing in land acquisition still exists; the private sector still bears the risk.
  - Procurement still uses minimum price after satisfying the output specification, instead of the best-value method.
  - The government contracting agency (GCA) lacks an understanding of public sector comparator (PSC) and value for money (VfM).

- PPP implementation may face challenges related to the decentralisation policy in Indonesia. Decentralisation causes an increase in political risks as the turnover of government officials may mean that, for example, new tariffs could be applied or budget approvals/allocation may be put on hold, leading to delays in the PPP project. Decentralisation also increases bureaucracy complexity, with more agencies involved in approving any progress in the PPP project, or more permits required. This increases uncertainty for the private sector and also leads to delays in implementation of the PPP project.

- Although the government has assigned the State Asset Management Agency (LMAN) to handle land acquisition funding, land is still a major obstacle in PPP implementation. Several projects have been postponed due to this issue. There have been cases of land for the PPP project being reclaimed by local residents, imposing additional costs and juridical duty on the private sector. Also, LMAN has been late in reimbursing several projects for land acquisitions due to incomplete documents submitted to LMAN, leaving the private entities involved to bear the additional costs.

- Several issues need to be considered in developing a PPP contract or agreement that would encourage higher private participation in PPP: (1) the vulnerability of the contract to political changes; (2) the need to incentivise private entities by allowing them to internalise any gains made through their own efficiency efforts after a contract is signed; (3) the enforcement of the contract.

- The risk mitigation plan should be further refined to clearly cover potential risks, e.g., the risk of the ‘take and pay’ provision in clean water projects when PDAM fails to meet the requirements due to lack of demand and capacity.

6.2 RECOMMENDATION

Based on the findings discussed in Section 6.1, several recommendations are proposed, from the short-run perspective as well the long-run one. These are presented in Table 6.1.

Table 6.1. Recommendations for the five most-mentioned topics during interviews on PPP implementation in Indonesia

	Issues and Achievements	Recommendation	
		Short Run	Long Run
Bureaucracy and Regulation	• Lack of PPP awareness in the government including the executive and legislative branches and law enforcement • PPP is still regulated under presidential decree, and not yet stipulated under law, causing challenges in aligning PPP regulation with other sectoral laws • Strong political will accelerates project implementation both from the executive and legislative branches • Social infrastructure projects are included in list of PPP projects • Increased bureaucracy due to decentralisation (more permits and agencies) in water infrastructure • PSC mechanism is not yet clearly developed and implemented in PPP projects	• Set a technical guidance or standard operating procedures for GoI and legislators for PPP process approval • Capacity building of PPP to government	• Improve investment climate and efficiency in bureaucratic procedure • PPP law enactment • The role of institutional champions (KPPIP and PPP Joint Office) need to be strengthened to accelerate PPP projects
Government Support & Facilities	• The government has established supporting PPP institutions (IIGF, SMI, IIF, LMAN, PPP Joint Office) • The presence of government support and technical assistance (VGF, PDF) • The presence of government guarantee • New return on PPP investment (availability payment) aside from user fee	• Increase the willingness of GoI to provide VGF to other sectors that have bigger economic and social impact • Provide more hybrid or blended financing, such as the special allocation funds (DAK) for the Umbulan water supply	• More government guarantees needed to cover PSN to increase investors' appetite
Land acquisition	• The government has provided land acquisition funding for PPP projects listed as PSN through LMAN • Postponed implementation due to late land acquisition • Unclear administrative procedures by the Commitment-Making Officer (PPK) causes delay in reimbursement by LMAN	• Need integrated online system for land acquisition • Strengthen the role of PPK in providing clearer administration	• Need more binding regulations and laws to accelerate land acquisition
PPP Contract	• Contract is vulnerable to political and regulation changes • Private-sector gains through efficiency after contract are not clearly guaranteed, causing the private sector to lack confidence in PPP projects	• Review of PPP contracts and enforcement • Socialisation (engagement to promote awareness) of PPP to the judicial sector	• Additional clause in contract to secure private efficiency gains
Risk Mitigation	• The premium fees of guarantee funds are burdensome for the private sector • Relational contract is needed to anticipate uncertainty during project implementation	• Evaluating current risk mitigation strategy	• Implement relational contract that allows internal/non-court renegotiation when unforeseen risk happens

GoI=government of Indonesia; IIF=Indonesia Infrastructure Finance; IIGF=Indonesia Infrastructure Guarantee Fund; KPPIP= Committee for Accelerating the Provision of Infrastructure; LMAN=State Asset Management Agency; PDF= project development facility; PPP=public–private partnership; PSN=National Strategic Projects; SMI= PT Sarana Multi Infrastruktur; VGF=viability gap fund
Source: LPEM FEB UI

6.2.1 Toll road sector

To attract more investment, the government should be more active in establishing robust regulations and mandating that all authorities or agencies follow them. Risk sharing between operators and governments will definitely increase the desire of the private sector or state-owned enterprises (SOEs) to invest as they can estimate their potential gain or loss better.

Beyond capital returns, property rights protection (for the toll road) and other institutional safeguards are needed by private investors in developing economies (Davidson, 2015).[19] Given that the toll road sector sees a high degree of government intervention, the risk of changes due to political reasons such as change in administration must be fully borne by the government and its agencies. This has to be stipulated in the PPP agreement. It is also much better if the land acquisition process is completed before investment is sought as uncertainties related to land acquisition contribute significantly to lower investment appetite.

6.2.2 Clean water sector

Regulatory agencies in the clean water sector should be designed in such a way that they are reasonably free from short-term interference from politicians and other organised groups (certain categories of customers, suppliers, etc.). Any of these groups with potentially large stakes in the regulatory process has incentives to invest significant resources in influencing it, leading to regulatory rules that extract too much rent from the firms, expropriate the quasi-rents and induce too little investment as a result. On the other hand, the need for credibility and independence should be balanced by the fact that a highly independent regulator may be more easily captured by the utilities themselves, leading to high prices, social discontent and political opposition to further private participation.[20] Accountability, through open access to information, transparency of decision-making processes and possibility of judicial review, is key.

6.2.3 Proposed capacity building

Capacity building is needed to encompass the following aspects:

1. Capacity building related to VfM

PPP project proposals rarely involve a consideration of the broader social costs and benefits. This is reflected typically in bids and PSC that focus exclusively on the direct output specification and costs of the project. GCAs should be able to incorporate specifications of quality and technology in their valuation of PPP infrastructure design proposals. The creation of an explicit VfM method should be worth prioritising in the near term. There is a necessity for technical capacity building for the development of quality infrastructure with an underlying focus on VfM and life cycle cost, to ensure unbiased and agreeable VfM and PSC assessments. Although the two-stage bidding process is newly implemented, Indonesia could be reformed entirely to shift from the minimum price to the best-value bidding criteria. Therefore, future capacity building should address how to

[19] J.S. Davidson, *Indonesia's Changing Political Economy* (Cambridge University Press, 2015).
[20] J.J. Laffont, *Regulation and Development* (Cambridge: Cambridge University Press, 2005).

move beyond minimum standards in developing infrastructure and how to reach higher quality to achieve optimum life cycle cost.

2. Capacity building for the GCA regarding PPP, especially for regional governments

The GCA is a key stakeholder in infrastructure development. Besides preparing the pre-feasibility study, the GCA monitors (and therefore needs to have the capacity to monitor) the construction and operation of the PPP project until termination. However, regional government lacks comprehensive knowledge on the PPP mechanism, which highlights the importance of capacity building and assistance in project preparation and design. A PPP node or centre (known as '*simpul* KPBU') is needed, particularly in the municipal government, to oversee and coordinate strategic regional government initiatives. In addition, the PPP Joint Office should provide educational facilities for the capacity building. Lastly, there is a need for more institutions to be in charge of the project development facility (PDF) to help the GCAs increase the effectiveness of the preparation and the implementation of PPP project transactions (currently, the responsible agencies include only SMI, IIGF and Danareksa).

ANNEXES

ANNEX A. LIST OF INTERVIEWED STAKEHOLDERS

Government and Decision-makers	State-owned Enterprises (SOEs) and Private Entities
1. PPP Joint Office 2. Directorate of PPP and Finance Engineering – Ministry of National Development Planning (BAPPENAS) 3. PINA – Ministry of National Development Planning (BAPPENAS) 4. Ministry of Finance 5. LKPP 6. BPJT 7. BPPSPAM 8. PSPAM PUPR 9. IIGF 10. PT SMI 11. LMAN	1. PT Jasamarga Surabaya 2. PDAM Kab. Pasuruan 3. PDAB East Java 4. PT Meta Adhya Tirta Umbulan 5. Jasamarga Batang Semarang 6. Lintas Marga Sedaya 7. Waskita Toll Road 8. PT Moya Indonesia 9. PDAM West Semarang 10. PDAM Bandar Lampung 11. BPKP Lampung

ANNEX B. PPP AND PINA ACHIEVEMENTS

Table B.1. PPP achievements, 2015 to present

Stages	Solicited		Unsolicited	
	Number of Projects	Project Value	Number of Projects	Project Value
Planning	14	USD396.1 M + 9 projects under calculation	4	USD 140.4 M + 1 project under calculation
Preparation	9	USD3,331.8 M + 1 project under calculation	2	USD 138.7 M
Transaction	10	USD3,634 M	7	USD 10,346.2 M
Construction	13	USD9,881 M	-	-
Operation	2	USD159 M	2	USD 2,189 M
Total	58	USD17.4 Billion	15	USD 12.8 Billion

Source: Ministry of National Development Planning of Indonesia, updated March 2019.

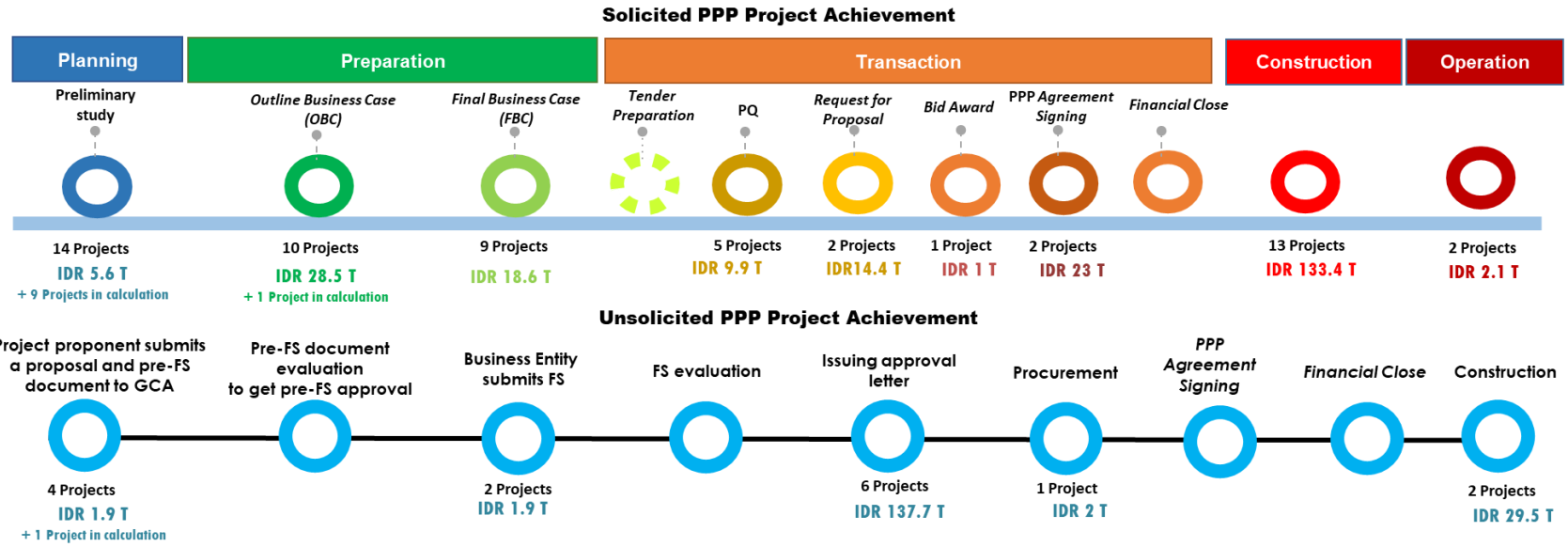
Table B.2. PINA achievements, 2017–2018

No	Project	Business Entities	Financing Mechanism	Financial Close
1	Kertajati Airport	BIJB Kertajati	Limited Equity Funds (RDPT)	USD69.7 million
2	Biomass Power Plant	Nusantara Infrastructure	Equity Financing	USD190 million
3	Fiber Optic Cables	PT. Len Industri	Equity Financing	USD13 million
4	Ancol Timur-Pluit (elevated) Toll Road and North-South Link Bandung	PT. Citra Marga Nusaphala	Contractors Pre-financing	USD2.2 billion
5	Power Plant	PT. PP Energi	Perpetuity notes	USD74 million
6	Power Plant	PT. PLN	Islamic Bonds	USD11 million
7	Investment Fund	SMI	Islamic Bonds	USD11 million
8	Trans Java Toll Road	Waskita Toll Road	Equity Financing	USD380 million
9	Plantation	PT. Perkebunan Nusantara III	Medium-Term Note	USD190 million
10	Renewable Energy	Nusantara Infrastructure	Equity Financing	USD60 million
11	Renewable Energy	Carpediem Electrical Nusantara	Equity Financing	USD23.5 million
Total Financial Close				USD3.3 Billion

Source: Non-Government Budget Investment Financing (PINA), updated February 2019

ANNEX C. NUMBER AND VALUE OF SOLICITED AND UNSOLICITED PPP PROJECTS BASED ON PPP PIPELINE

Figure C.1. PPP project achievement for solicited and unsolicited projects



FS=feasibility; GCA= government contracting agency; PQ=pre-qualification
Source: Ministry of National Development Planning of Indonesia, updated March 2019.

ANNEX D. CURRENT PPP REGULATIONS

Topic	Regulations	Key Points
General Regulations on PPP	• Presidential Regulation no. 38/2015 regarding cooperation between the government and business entity on infrastructure provision • Ministry of National Development Planning/Head of National Development Planning Agency no. 4/2015 regarding operational guideline for public–private partnership (PPP) in infrastructure provision • Head of National Procurement Agency (LKPP) Regulation no. 19/2015 regarding guideline for procurement of business entity for PPP in infrastructure provision.	These regulations govern PPP for specified infrastructure projects, particularly for adding economic and social infrastructure. Projects may be developed on a solicited or unsolicited basis but in all cases the selection of a business entity shall be conducted through an open tender process. The government contracting agency (GCA) may be at the regional or central government level. The government may provide fiscal and/or non-fiscal support to improve the feasibility of the infrastructure project. Project shall be structured to allocate risk to the party best able to manage the risk.
Procedures for Providing Government Support	Government Support • Ministry of Finance Regulation no. 223/2012 regarding viability gap funding. • Ministry of Finance Regulation no. 170/2015 regarding feasibility support for some construction costs. • Ministry of Finance Regulation no. 73/2018 regarding project development facility. Government Guarantee • Presidential Regulation no. 78/2010 regarding government guarantee for PPP infrastructure project • Ministry of Finance regulation no. 260/2010 as having been amended by Ministry of Finance Regulation no. 8/2016 regarding guideline on the government guarantee Regulation of Availability Payment • Ministry of Finance Regulation no. 190/2015 regarding availability payment for PPP in infrastructure provision	The government give many forms of support and guarantees in order to accelerate the development of infrastructure through the PPP scheme, including a viability gap fund (VGF), a project development facility (PDF), the Indonesia Infrastructure Guarantee Fund (IIGF) and availability payments VGF is funding provided by the government for infrastructure projects under the PPP scheme to make a project that was economically viable but financially unviable become viable. VGF is allocated through the government budget mechanism, considering the government budget ability, fiscal sustainability and fiscal risk management. The PDF is an assistance to GCAs to develop pre-feasibility studies, bidding documents and to manage projects during the transaction phase to reach financial close. The IIGF is a state-owned enterprise administering guarantees for infrastructure projects. This is expected to reduce the cost of financing of PPP infrastructure projects by improving the quality of PPP projects and their creditworthiness, and to help the government manage its fiscal risk better by ring-fencing government obligations vis-a-vis guarantees. The IIGF will establish a comprehensive and

	• Ministry of Home Affairs Regulation no. 96/2016 regarding availability payment sourced from the regional budget (APBD) for PPP in infrastructure provision	consistent framework for appraising projects and making decisions regarding the provision of government guarantees to PPP projects. Availability payment is one source of return for private investment in the form of periodic payment for the availability of services in the PPP scheme. Availability payment covers capital expenditure, operational expenditure and return on investment, and can be expected to increase the interest of the private sector in providing public infrastructure.
Regulations on Non-Government Budget Investment Financing (PINA)	• Presidential Regulation no. 20/2016 on the amendment of Presidential Regulation no. 66 of 2015 on the National Development Planning Agency	PINA is a facilitation scheme aimed at accelerating the private investment financing of Indonesia's strategic projects. The funding is from the non-government budget (non-APBN/APBD) and is fully supported by government policies.

ANNEX E. REGULATIONS RELATED TO PPP IN TOLL ROAD

No.	Regulations	Description
1.	Law no. 38/2004 on **roads**	The regulation renews Law no. 13/1980 on roads. It addresses the function of all roads, which are clustered as central, provincial, district and city roads. For the toll road, even though it can be operated by government-owned or private entities, they are initiated and owned solely by the government. The government regulates and monitors the specific definitions, requirements, and ideal conditions, from the tendering phase to the maintenance period of toll roads. The process of land acquisition is carried out by the government based on regional or spatial plans; however, land acquisition funds may come from the government itself or from business entities. This regulation also stipulates the transfer of authority from Jasa Marga (state-owned toll road entity) to the Toll Road Authority (BPJT) as the new toll road regulatory agency. Since the issuance of this regulation, Jasa Marga is authorised to function solely as a toll road operator.
2.	Government Regulation (PP) no. 30/2017 on third amendment to PP no. 15/2005 on **toll roads** that amended several previous laws: • PP no. 15/2005 on toll roads • PP no. 44/2009 on first amendment to PP no. 15/2005 • PP no. 43/2013 on second amendment to PP no. 15/2005	This addresses specific regulation of toll roads including the definition of the quality requirements. It stipulates that toll roads should have a higher level of security and comfort compared to existing public roads through a longer distance road and high mobility. Toll road procurement can be initiated by the government or business entities in accordance with the toll road development plan. Selection of business entities for economically and/or financially feasible toll road concessions is based on legal tender through a regulatory agency, BPJT. But the government also has the right to choose directly, particularly a state-owned enterprise (SOE), to develop toll road projects given the limited funds and time to construct the infrastructure. The regulation also states that an SOE can work together with other SOEs or the private sector. The construction is the full responsibility of the operators on condition that they take into account the quality and efficiency requirements specified for toll roads. The regulation also states the minimum service standards (SPM). The SPM covers toll road conditions, average travel speed, accessibility, mobility and safety. BPJT monitors and reports on the SPM to the Minister of Public Works and Housing regularly (every six months).
3.	Ministry of Public Works and Housing Regulation no. 43/PRT/M/2015 on the **toll road authority**	As stipulated in Law no. 38/2004 on roads, the toll road sector is no longer regulated by Jasa Marga. Instead the government established a specific regulatory agency, BPJT. BPJT is a non-structural agency responsible to the Minister of Public Works and Housing. BPJT partly carries out the government's authority to regulate, operate and supervise toll road business entities called BUJT. BPJT has several functions: first, BPJT has responsibility for preparing toll road projects, which includes conducting feasibility studies, analysing a toll road's financial viability, preparing the environmental impact assessment (known as AMDAL) study and procuring toll road investments through a transparent and open bidding process. Second, BPJT oversees the the planning, construction, operation and maintenance of toll road projects. Third, they recommend potential initial and adjusted tariffs to the Minister. Fourth, BPJT has the right to temporarily take over toll road projects that have failed to construct or finish the concession period. In order to run the agency effectively, the

		BPJT committee consists of three elements, the government, the stakeholder and the community representative.
4.	**Land Acquisitions** Law no. 5/1960 on basic agrarian law Law no. 20/1961 on land expropriation Presidential Regulation no. 36/2005 on provision of land for public facilities Presidential Regulation no. 65/2006 on amendment to Presidential Regulation no. 36/2005 Head of National Land Agency Regulation no. 3/2007 on implementing Presidential Regulation no. 36/2005 as amended by Presidential Regulation no. 65/2005 Presidential Regulation no. 30/2015 on procurement of land acquisition development for general interest Presidential Regulation no. 102/2016 on land acquisition funding for implementation of central-level strategic projects	Based on Presidential Regulation no. 13/2010, government support may take the form of land acquisition for the project, in which case it shall be conducted prior to project tendering. Depending on the financial viability of the project, the business entity may be required to reimburse all or part of the land acquisition cost to the government contracting agency (GCA) that acquired the land. Such a requirement will be stated in the tender documents. Presidential Regulations no. 36/2005 and no. 65/2006 specify the procedure for the government to acquire land. In order to accelerate land acquisition, the government shall set up a committee for land acquisition, which then commissions an independent land appraisal to determine the price of the land. In the event that the land committee and landowner cannot agree on compensation, the committee may determine the compensation and instruct the respective government institution to deposit the compensation at the district court, which provides the government with a right of way over the land. The regulation also provides that once the government has designated an area for an infrastructure project, any party that intends to purchase land within the area must obtain prior approval from the government.

ANNEX F. CURRENT REGULATIONS RELATED TO PPP IN WATER SECTOR

No.	Regulation of PPP Scheme in Water Sector	Details of Regulation
1	Government Regulation no. 121/2015 on exploitation of water resources	Exploitation of water resources needs to consider: a. Type of business structure b. Priorities to get licence agreement, where exploitation of water resources by a firm or sole proprietorship is the least of the priorities c. Principles of water resources management.
2	Government Regulation no. 122/2015 on the water resources utilisation scheme	State-owned enterprise (SOE) or regional-owned enterprise (ROE) sometimes has insufficient financial capacity in terms of pipe procurement in water supply (SPAM). Therefore, it can form a partnership with a private firm under certain circumstances; including: a. Licence in water absorption owned by SOE or ROE **b.** Partnership in water supply development prioritises low-middle income class. Partnership with the private sector can only be formed in: a. Raw water and production unit b. Distribution unit (for building pipe only) **c.** Technology in terms of operation and maintenance using performance-based contract. Partnership agreement includes a. Build–operate–transfer (BOT) for installation of water treatment plant b. BOT plus for bulk water transaction.
3	Ministry of Public Works and Housing Regulation no. 19/2016 on government support in water infrastructure	Central government and/or regional government can contribute in the form of: a. Government support (feasibility support and/or fiscal incentive) b. Other government support (fiscal and non-fiscal contribution) c. Government guarantee.
4	Government Regulation no. 54/2017 on Regional Owned Enterprise (ROE)	1. ROEs can form partnerships with other entities. 2. The partnership needs to be mutually beneficial and protect the interests of the government, citizens, and cooperating parties. 3. Any partnership with an ROE is under the ROE Director's authority or discretion, aligned with the company's internal mechanism. 4. An operational partnership could be formed based on the utilisation of the ROE's assets. 5. Partnerships with other business entities in the form of capital need to consider: a. Approval from extraordinary general meeting of stockholders b. Healthy ROE financial report c. Related business ownership 6. Partnerships can be appointed by a regional government.

ANNEX G. APEC MATRIX REVIEW CRITERIA

Note: In the following, 'PR' refers to a Presidential Regulation and 'PP' refers to a Government Regulation.

Criteria		Evaluation	Special Issues related to Clean Water	Special Issues related to Toll Roads
1. General	Public procurement	Legal system regarding public procurement is in place: Presidential Regulation (PR) no. 54/2010 on public goods/services procurement and its amendment.	Detailed laws and regulations related to undertaking PPP based water supply projects in Indonesia are (1) Water Resources Law no. 11/1974 (replacing the cancelled Water Resources Law no. 7/2004 on water resources); (2) Ministry of Public Works and Housing (MPWH) Regulation no. 16/2005 on local government role in water supply; and (3) PR no. 38/2015, issued by the government as the replacement for PR no. 67/2005 and its amendments (PR no. 13/2010, PR no. 56/2011 and PR no. 66/2013)	Yes, the latest being under Article (2) of Government Regulation (PP) no. 30/2017 on third amendment to PP no. 15/2005 on toll roads, which amended several previous laws: PP no. 15/2005 on toll roads, PP no. 44/2009 on second amendment to PP no. 15/2005
	Legal system related to PPP	Public-private partnership (PPP) law is in place in the form of PR no. 38/2015 on PPP in infrastructure procurement.	There are no specific regulations for clean water; general infrastructure regulations apply.	Yes, in general, legal system recorded under PR no. 38/2015 while specific applied PPP framework for toll roads regulated under PP no. 15/2005 on toll roads.
	Accounting system	Since 2015, Indonesia has followed the International Financial Reporting Standard (IFRS)	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Tax law	No specific tax laws for specific projects, but some PPP projects may obtain tax holidays.	Ministry of Finance Regulation no. 223/PMK.011/2012 to support fiscal incentive.	Yes. In relation to PPP and toll road investment, general regulations on taxation apply, while the specific tax law for infrastructure projects such as toll roads stipulates Ministry of Finance Regulation no. 35/2018 on tax holiday implementation in order to support fiscal incentives.
	Environmental and social assessment	Indonesia has Law no. 32/2009 on environmental protection and conservation, and PP no. 27/1999 on environmental impact assessment (EIA). Infrastructure projects are required to undergo EIA as specified in Minister of Environment Regulation no. 11/2006 on types of business and activity plans.	Yes, guidelines offered under Ministry of Public Works and Housing, Ministry of National Development Planning (BAPPENAS), Indonesia Infrastructure Guarantee Fund (IIGF).	Yes, based on Law no. 32/2009 on environmental protection and management guidelines, which also recorded under PP 30/2017 (last amended by 15/2005) that toll road projects require an EIA (*analisis mengenai dampak lingkungan*, AMDAL) prior to project implementation
	Funds for Infrastructure Projects	PPP projects may obtain a project development facility (PDF) for conducting a pre-feasibility study; viability gap fund (VGF) for projects that are not financially viable; and government guarantee for projects that are chosen as PPP projects (solicited and unsolicited) based on PR no. 38/2015 and Ministry of Finance Regulations.	The government institution responsible for the PPP project (PJPK) is obliged to do a pre-feasibility study on infrastructure which includes the study of the legal, technical, financial and economic aspects, risk management, and environment and social impacts. There are also funds for conducting a feasibility study under PP no. 30/2017 on the third amendment to PP no. 15/2015.	Yes, there is specific regulation for providing funds for conducting a feasibility study under PP no. 30/2017 on the third amendment to PP no. 15/2005

Criteria		Evaluation	Special Issues related to Clean Water	Special Issues related to Toll Roads
1. General	Funds for PPP Project Promotion and Government Guarantee	PR no. 78/2010 on infrastructure guarantee insures projects against discriminatory regulatory risks during the life cycle of the projects.	There are no specific regulations for clean water; general infrastructure regulations appl.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Structure for project promotion	Institutions that promote infrastructure PPP projects include the PPP Joint Office, Committee for Accelerating the Provision of Infrastructure (KPPIP), Indonesia Investment Coordinating Board (BKPM) (market sounding), Directorate of PPP Development Planning Agency (BAPPENAS), Non-Government Budget Investment Financing (PINA), PT Sarana Multi Infrastruktur (SMI), IIGF.	Yes, KPPIP.	Yes, in toll road projects, the promotion role has been taken by the Indonesian Toll Road Authority (BPJT) as the regulatory authority under the Ministry of Public Works and Housing.
	Arbitrary policy or changes in the system	PPP projects that receive government guarantee are protected from regulatory risks that arise during the lifetime of the project under PR no. 78/2010	Yes, provided by the Ministry of Public Works and Housing.	Yes, it follows PR no. 78/2010 on infrastructure guarantee which states the guarantee mechanism for infrastructure projects. In the case of toll roads, which project should be guaranteed and what kind of risk will be guaranteed are decided by BPJT and IIGF.
	Land acquisition	From 2014, listed infrastructure projects in KPPIP are financially supported through a reimbursement mechanism by the State Asset Management Agency (LMAN).	There are no specific regulations for clean water; general infrastructure regulations apply.	Yes, since 2012, toll road projects have followed UU 2/2012 on land procurement for public interest and PR no. 71/2012 for its implementation. The new regulation shifts responsibility for land acquisition from the private sector to the government. This new law also makes the duration of land acquisition more precise. If the government cannot acquire the land after three years, they have to adjust the location of the project.
	System related to foreign exchange	Indonesia follows a managed floating exchange rate regime and free movement of capital mechanism.	Risk can be shared with the government in case extreme fluctuations.	Based on the guidelines on toll road investment risk published by the Ministry of Public Works and Housing in 2005, these are two specified foreign exchange risks: (1) credit risk: the risk of extreme fluctuations on foreign exchange which can be shared with the government; and (2) the political risk of foreign exchange convertibility which is allocated solely to the public/government.
	Policies taking account of the poor, socially vulnerable, gender gap	Indonesia has National Health Insurance, the family welfare card, *Kartu Keluarga Sejahtera* (KKS), poverty laws (Law no. 13/2011) and gender equality law (Law no. 1/2017)	There are no specific regulations for clean water; general regulations apply.	There are no specific regulations for toll roads; general regulations apply.
	Guidelines for preventing bribery and corruption	Indonesia has a law to prevent bribery and corruption (Law no. 31/1999 regarding eradication of criminal acts of corruption)	There are no specific regulations for clean water; general regulations apply.	There are no specific regulations for toll roads; general regulations apply.

Criteria		Evaluation	Special Issues related to Clean Water	Special Issues related to Toll Roads
2. Project planning	Consistency between policy/master plan	All government projects are listed in the central development plan, but PPP projects are also listed in the PPP blue book.	Yes, from seven National Strategic Projects (PSN) related to clean water provision; the clean water provision systems of Semarang Barat, Umbulan, Lampung, Mamminasata, Jatiluhur are listed	Yes, from 40 PPJT toll road projects, all listed as PSN in toll road infrastructure development. Related to PPP, all the projects included in the PPP Potential Projects plan are specified in the General Plan of National Roads proposed by the Directorate General of Highways.
	Contribution of unspecified projects to policies and goals	Projects are included in the master plan.	The project has been selected in the master plan.	The project has been listed in the Indonesian strategic plan.
	Amendment of Master Plan for unspecified projects	Projects are included in the master plan.	The project has been selected in the master plan.	The project has been listed in the Indonesian strategic plan.
	Quantitative measurement of project economic performance	No. There is usually an economic impact assessment for infrastructure projects, but no requirement for economic internal rate of return (EIRR).	Yes, EIRR provides information related to a project's performance. Projects from the PPP scheme range between 13–15 percent, with average margin for investor around 2 percent above expected EIRR.	Yes, the feasibility study criteria under Presidential Regulation no. 38/2015 on PPP in infrastructure procurement must contain EIRR.
	Consideration of alternative methods for comparison of economic performance	No, there is no such requirement under prevailing regulations	Financial internal rate of return (FIRR) and net present value (NPV) are provided.	FIRR and NPV are provided.
	Environmental and social assessment considerations	Yes, at least on paper. Every infrastructure project must be accompanied by AMDAL (environmental impact assessment) although the level of rigor between AMDAL of various infrastructure projects may vary	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
3. Feasibility study	Stipulation of project achievements: - Minimum requirements in accordance to law and regulation - Quantitative indicators - Life cycle cost model specification	Yes, there are certain common minimum requirements for a PPP project feasibility study as stipulated by prevailing cross-sectoral regulations such as PR no. 38/2015, PR no. 13/2010 and Ministry of Finance Regulation no. 38/2006. The specific levels of achievement use quantitative indicators in the project. No, the life cycle cost (LCC) calculation model is not specified.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.

Criteria		Evaluation	Special Issues related to Clean Water	Special Issues related to Toll Roads
3. Feasibility study	Consideration of environmental and social assessments: - Treatment of workers and working conditions - Environmental contamination prevention/reduction and measures - Local community's sanitation/safety - Land acquisition and inhabitants' relocation - Conservation of biological diversity and sustainable control of natural resources - Respect for indigenous people and protection of cultural heritage - Economic benefits for local capacity	Yes. Pursuant to Article 23(1)(a) of regulation no. 4/2015, preparation for PPP assessment includes pre-feasibility study activities, consisting of: (1) economic and commercial studies and (2) social and environmental impact assessment. Moreover, pursuant to Article 36 of PR no. 38/2015, procurement of the implementing business entity for a PPP will be carried out after obtaining the determination of the location of the land required to execute the PPP, except otherwise regulated by the legislation. Furthermore, pursuant to Article 10(1) of the same law, land acquisition for a PPP will be carried out by the government in accordance with the laws and regulations regarding land acquisition for development in the public interest.	There are no specific regulations for clean water; general infrastructure regulations apply.	Yes, under PP no. 30/2017 on third amendment to PP no. 15/2015 on toll roads, in addition to a financial analysis and feasibility study, a toll road plan has to conduct an AMDAL.
	Safety considerations: - Appropriate construction management and maintenance, and operation management - Safety control for users and residents in the neighbouring area - Resilience against disasters - Response in times of disaster or emergency	Yes. Under the Ministry of National Development Planning (BAPPENAS) Regulation no. 4/2015, PPP is implemented in accordance with the laws and regulations related to aspects of work safety. However, the lists mentioned are not explained in detail.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.

Criteria		Evaluation	Special Issues related to Clean Water	Special Issues related to Toll Roads
3. Feasibility study	Risk management: - Appropriate identification of risks assumed for individual projects - Method for prioritising identified risks - Measures against identified risks	Yes. Directorate of PPP and Finance Engineering – Ministry of National Development Planning (BAPPENAS) works with government contracting agencies (GCAs) to ensure that project risks are clearly identified and allocated among the various parties to the project. This risk assessment is typically conducted during the feasibility study, and the resulting allocations captured in the draft Cooperation Agreement to be included with the tender documents. Examples of some of the principal risks identified in Indonesian PPP projects, and typical allocation and mitigation measures, include: land acquisition; tariffs; demand; economic and political risks; and the off-taker creditworthiness. Hereinafter, pursuant to Article 30(2)(e) of Regulation no. 38/2015, the pre-feasibility study will provide conclusions on the following issue: risk identification and mitigation recommendations, corresponding risk allocation. Furthermore, pursuant to Article 23(1)(a)(6) of BAPPENAS Regulation no. 4/2015, the pre-feasibility study will include a risk assessment.	There are no specific regulations for clean water; general infrastructure regulations apply.	Yes, there are several identified risks stated in the guidelines on toll road investment risk published by Ministry of Public Works and Housing in 2005, such as project performance risk, credit risk, project performance, risk of government, and risk of *force majeure*. In the guidelines there is an analysis of the level of risk in toll roads based on equation of investment risk factors which scales between 0–1 (categorised as high (>0.7), medium (0.4 –0.7) and low risk (<0.4) factor value).
	PPP Project risk sharing between the public and private sectors	Under Article 1(4) of PR no. 78/2010, Indonesian PPP regulations require that risks be allocated to those parties best able to manage, control or prevent, or absorb the risk of infrastructure.	There are no specific regulations for clean water; general infrastructure regulations apply.	Yes, based on Guidelines of Risk Allocations issued by IIGF in 2016, some risk such as credit risk (interest rate, foreign exchange), ramp up period/traffic, and *force majeure* can be shared between public and private sectors
	Study on the private market	Yes. According to BAPPENAS Regulation no. 4/2015 Article 1(17 and 18), Article 16 and Article 27, market sounding and public consultation should be carried out to consider the benefits and impacts of the PPP on the interests of the community.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.

Criteria		Evaluation	Special Issues related to Clean Water	Special Issues related to Toll Roads
3. Feasibility study	Selection of the procurement method	Yes. Under Article 21(2) of PR no. 38/2015, the PPP project is evaluated based on (1) conformity with the Indonesia's Medium-Term Development Plan/Regional Medium-Term Development Plan and the infrastructure sector strategic plan; (2) conformity with spatial planning; (3) linkages between infrastructure sectors and between regions; (4) cost benefit analysis; and (5) value for money (VfM) analysis. Nevertheless, VfM assessment appears to play a somewhat limited role in the decision as to whether or not a project should be undertaken. It also plays a limited role when the government identifies which projects are suitable for potential PPP status. The focus of the PPP identification process is largely on economic, financial and technical viability and the possibility to transfer risk.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
4. Procurement	Procurement quality aspects	Yes. On procedures for cooperation between the government and business entities in the provision of infrastructure, the Ministry of National Development Planning (BAPPENAS) Regulation no. 4/2015 states that output specification includes a minimum services standard that includes quantity, quality and availability.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Incentives for procurement	Under PR no. 78/2010 on government guarantee for cooperation project between the government and business entity (KPBU) provided by and infrastructure guarantor company. This regulation relates to the provision of government guarantees for PPP infrastructure projects through the IIGF. It provides contingency support/guarantee for the risks caused by the government's action or inaction.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.

Criteria		Evaluation	Special Issues on Clean Water	Special Issues on Toll Roads
4. Procurement	Risk allocation in procurement	Yes. According to PR no. 13/2010, the Cooperation Agreement considers the rights and obligations of the parties, including risk allocation.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Basis of Evaluation more than price	Yes. Provided in PR no. 38/2015.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Standard form of agreement	Yes. The PPP agreement shall be made in accordance with PR no. 38/2015. The detail of the PPP form is explained in the Appendix of BAPPENAS Regulation no. 4/2015.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Competitive dialogue	Yes. Pursuant to Article 4(c) of PR no. 38/2015, PPP is conducted based on competition, meaning that the procurement of a business entity cooperation partner is conducted fairly, openly and transparently, with consideration to the principle of fair business competition.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Enhancement of local capacity	Yes. Article 1(20) of BAPPENAS Regulation no. 4/2015 states that PPP feasibility should be evaluated by considering at least the legal, technical, economic, financial, risk management, environment and social aspects.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Evaluation criteria - Financial appropriateness - Track record in sufficiently similar projects - Keeping to construction schedule and appropriate cost control - Environmental impacts - Prevention of bribery	Yes. Pursuant to Article 14(3) of Regulation no. 38/2015, the infrastructure provision that may be initiated by a business entity must meet the following criteria: (1) technically integrated with the master plan of the sector concerned; (2) economically and financially feasible; and (3) the business entity that proposes the initiative has adequate financial capability to finance the implementation of the infrastructure provision. In addition, pursuant to Article 9(g) of LKPP regulation no. 19/2015, the PPP must sign an integrity pact.	There are no specific regulations for clean water; general infrastructure regulations apply.	Yes, under Article 20 of Ministry of Public Works and Housing Regulation no. 13/PRT/M/20, evaluation will be based on pre-qualification documents which include: application letter by the business entity, organisational structure plans as well as board of directors plan, audited financial statements for the last three years, business entity experience and also an integrity pact signed by the business entity. However, the environmental impacts are not clearly stated in the evaluation criteria.

Criteria		Evaluation	Special Issues related to Clean Water	Special Issues related to Toll Roads
4. Procurement	Accumulation of past record data	Not yet implemented.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Long-term project economics	Life cycle cost method has not been stipulated in the regulations. Pursuant to Article 21(2) of PR no. 38/2015, the PPP project is evaluated based on (1) its conformity with the economy's Medium-Term Development Plan/Regional Medium-Term Development Plan and the infrastructure sector strategic plan; (2) its conformity with spatial planning; (3) linkages between infrastructure sectors and between regions; (4) cost benefit analysis; and (5) VfM analysis; After BAPPENAS selects the project priority, it goes to KPPIP to determine the funding options, that is, whether the funding will come from (1) PPP; (2) state-owned enterprise (SOE); (3) public, based on Presidential Decree no. 75/ 2014.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Evaluation criteria: Method of achieving required service	There is no clear method for achieving the required service level	There are no specific regulations for clean water; general infrastructure regulations apply.	There are evaluation criteria, but no clear method for achieving the required level of service.
	Evaluation criteria: Construction schedule and cost control	Yes, it is stipulated in the Ministry of National Development Planning/National Development Planning Agency (BAPPENAS) Regulation no. 4/2015, in the pre-feasibility study, the construction schedule and costs are calculated with multiple scenarios as part of the technical study.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Evaluation criteria: Environmental impact	Yes, only in pre-qualification. Pursuant to BAPPENAS Regulation no. 4/2015 concerning procedure for cooperation between the government and business entities in procurement of infrastructure, the government is obliged to obtain environmental permits before starting the tender process and construction stage.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Evaluation criteria: Risk management	Yes, it is clearly stipulated. According to PR no. 13/2010, the Cooperation Agreement considers rights and obligations of the parties, including risk allocation.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads: general infrastructure regulations apply.

Criteria		Evaluation	Special Issues related to Clean Water	Special Issues related to Toll Roads
4. Procurement	Evaluation criteria: Technical aspects	Yes. Under PR no. 67/2005, the opening of the bid documents for each of the systems will be implemented as follows: (1) the Procurement Committee opens the box and Envelope I in the presence of auction participants; (2) Envelope I, containing administration and technical data, is opened, and becomes an attachment to the written report pertaining to the opening of the bid document in envelope I; (3) Envelope II containing data on the price is then presented by the auction participant once the participant has been declared as having passed the administrative and technical terms and conditions.	There are no specific regulations for clean water; general infrastructure regulations apply.	Yes, general infrastructure regulations apply.
	Contract management and method of monitoring	Yes. Pursuant to Article 44 of Regulation no. 38/2015, the Minister/Head of Institution/Head of Region will appoint a working unit in the Ministry/Institution/Region as a PPP Node, and the PPP Node has the task of formulating policies, and takes charge of the synchronisation, coordination, monitoring and evaluation of PPP development.	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Penalties and incentives for management of contract and monitoring	Yes. Article 32(2) of Regulation no. 38/2015 states that the PPP agreement (contract) should contain incentives (d), rights and obligations (e), and determinations on the dispute resolution mechanism, which should be arranged in stages, namely deliberation and consensus, mediation, and arbitration/court (k). Article 32(2) (h) of Regulation no. 38/2015 also states that the PPP agreement (contract) should contain determinations on the sanctions in the event the parties fail to meet the terms of the agreement.	There are no specific regulations for clean water; general infrastructure regulations apply.	Yes, stipulated under Ministry of Public Works and Housing no. 13/PRT/M/201; the process of proposal evaluation follows PR no. 67/2005.
5. Ex-post evaluation	Method for ex-post evaluation	There is no clear method for ex-post evaluation	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.
	Accumulation of ex-post evaluation data for next term project	There is no clear regulation for ex-post evaluation	There are no specific regulations for clean water; general infrastructure regulations apply.	There are no specific regulations for toll roads; general infrastructure regulations apply.

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