

Report
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PPP Support to Proinversión: Diagnosis and Recommendations Report

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Note on Scope of the Study: All the tasks and analysis performed under this project called 'Structuring the selection and competitive procurement of PPPs in Peru' contracted by PPIAF and commissioned to Steer Group are not an audit of Proinversión's project portfolio, or the processes carried out for their award, nor are they an exhaustive study of them. On the contrary, this study seeks to compile lessons learned and/or find general areas for improvement that can be strengthened through comparison with international PPP programs that are benchmarks of best practices at the global and regional levels.

Executive Summary

1.1 This report presents a set of recommendations to address the key areas and challenges for the maturing of the Peruvian PPP framework, identified in the Portfolio Review and Deep Dive analysis (Task 1) and summarized in chapter 1 of this report.

1.2 Recommendations are based on an alternative approach analysis presented in chapter 2. This is a gap analysis on how these key

challenges are tackled in Peru and Comparator PPP programs such as the UK, Canada, Colombia and Chile. Chapters 3 and 4 analyze in more detail two key aspects of the maturing of PPPs in the Peruvian context: Transitioning to alternative schemes to the RPICAO incentivizing more project finance structures, and management of Environmental and Social issues in PPPs.

1.3 A summarized version of recommendations by key area is presented in the

attached presentation (Executive Presentation - Diagnosis and Recommendations Meeting)

1.4 Every recommendation has a direct or indirect impact in the delivery of Value for Money and improving performance at project and portfolio levels.

1.5 Recommendations should be considered as a whole and not in isolation. Although implementing can take time they all need immediate action to deliver results.

1 Diagnosis

Introduction

1.1 Peru's legal and institutional framework for PPPs has reached OECD standards, including guidelines to guide the development of PPP projects with consolidated principles, clarity of processes, procedures, and responsible entities, as well as ongoing efforts to standardize key documentation and a Standard Contract. However, its operation and results are still in transit towards a mature system.

1.2 In Peru, as in many other emerging economies, it takes time to achieve an effective and efficient implementation of the PPP framework. This situation is common in the PPP maturity curve, which generally requires years of learning to reach its peak performance.

1.3 Due to different reasons, but mainly because the capacity of the system has not kept up with the high degree of policy and regulatory changes, Peru's PPP program has stagnated in recent years, with a pipeline that is now largely dependent on unsolicited proposals.

Objective

1.4 The objective of this study is to establish the current status of the procurement framework and the performance of the portfolio of projects that Proinversión has awarded in the last 10 years, in order to identify key areas for improvement, and thus have a baseline to feed the recommendations to support the evolution of the Peruvian PPP system.

1.5 It is important to note that these challenges are not unique to Peru and are common to all countries with PPP programs as part of their maturation process.

Hypothesis

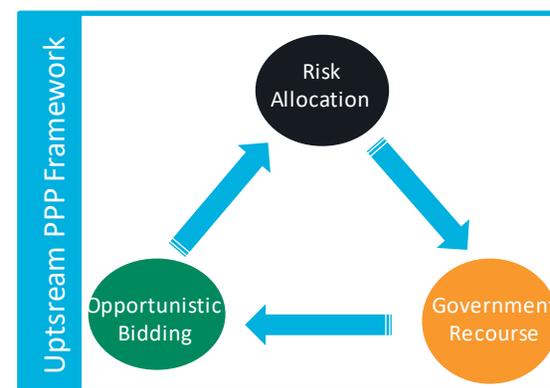
1.6 Three key challenges have been identified, the origin of which is usually found in the project structuring and procurement framework.

1.7 The first challenge refers to the risk allocation structures of PPPs in Peru, which in some cases are biased towards the private sector, transferring risks that the private sector is not capable of managing and/or mitigating, or keeping commitments that the State is not able to meet. As a result, in order to guarantee the bankability of the projects, it becomes necessary to implement payment instruments with a strong

recourse to the State, normally called Remuneration for Investment - RPI. Their legal nature virtually eliminates project risks for financiers, which consequently means that financiers do not have significant "skin in the game".

1.8 Finally, the combination of an unbalanced risk allocation structure and payment instruments with recourse to the State could create room for opportunistic bidding behavior by the private sector in the expectation of future renegotiations.

Figure 1.6 Key challenges for the Peruvian PPP framework



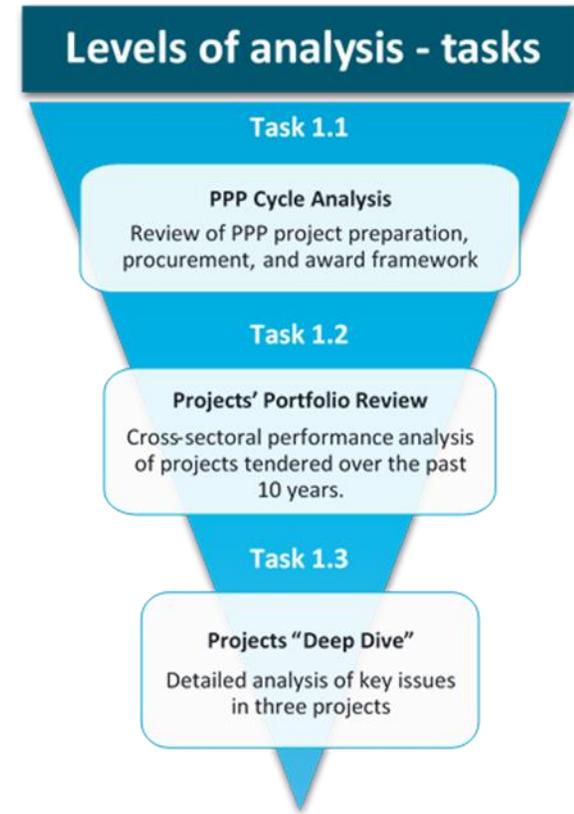
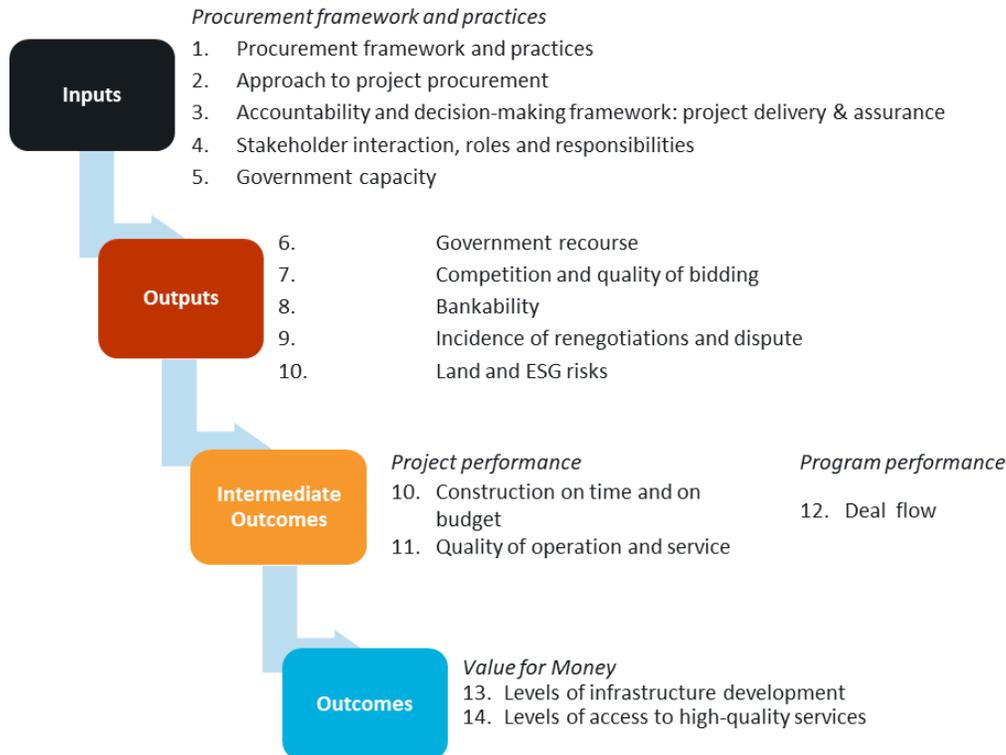
Fuente: Steer

Methodology

1.9 This study uses the Problem Definition as a guide to follow the logical chain of **inputs, outputs, intermediate results, and final results** of the current operation of the PPP program in Peru.

To follow this logic, a 3-level analysis is carried out: Task 1.1. The PPP cycle analysis presents an

input review, Task 1.2 conducts a high-level review, using quantitative and qualitative analysis on Proinversión’s project portfolio, identifying **outputs and intermediate results**. Finally, Task 1.3 delves into 3 projects to confirm the key areas of investigation identified in Tasks 1.1 and 1.2.



Conclusions

1.10 The conclusions of this analysis are based on the Portfolio Review Report and Deep Dive Report (Task 1). At the conclusion of the study it was possible to identify key areas of analysis to assist in the maturation of each of the key challenges.

1.11 The study identified that in practice there are key risks that are sometimes being transferred to the private sector, although the private sector is not in the best position to manage and/or mitigate them. Or risks that are generated by State commitments that the State is not in a position to meet. These risks are: compensation for early termination due to causes of the grantor; social opposition that prevents receiving the remuneration of the investment; risk of financing cost when the time between commercial closing and financial closing exceeds 6 months, the risk of land release that, although it is of the Grantor, indirectly affects the private sector due to the delays generated, especially in the transportation sector, and the risk of licenses and permits.

1.12 These risk allocation structures have encouraged the use of the RPICAO to guarantee the bankability of projects, especially in the

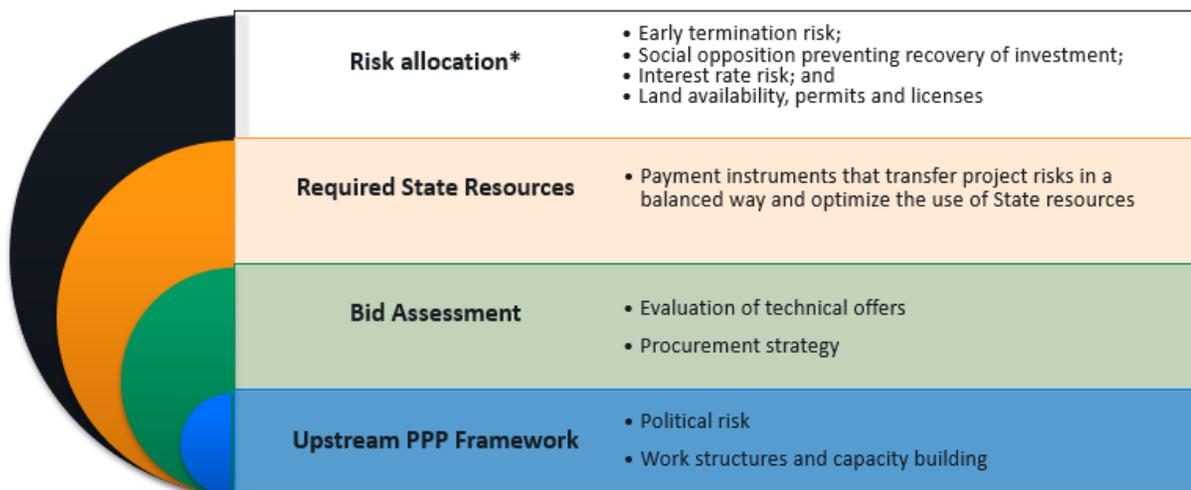
transportation and water and sanitation sectors, where such risks could be more latent.

1.13 However, based on the analysis, it was not possible to identify opportunistic behavior in bidding offers by the private sector in the expectation of future renegotiations. Mainly because it is not possible to establish a correlation between low bids and renegotiations or addenda. However, this study identified an opportunity to strengthen the evaluation of technical aspects during the bidding process.

1.14 On the other hand, it was possible to identify that Proinversión's pipeline of projects has slowed down since 2015 and, currently, it

presents a significant dependence on unsolicited proposals that today represent around 50% of the projects in the pipeline.

1.15 Finally, it was possible to identify an opportunity for improvement in the work structure between project owners (Ministries and other grantors) and Proinversión, with a clear need to support the strengthening of technical and project management capacities in the ministries involved in the provision of infrastructure. Likewise, among those interviewed, there was a general feeling that the number of actors within the PPP process and their different powers is generating a duplication



of actions on the same issues, slowing down times and processes.

1.16 It should be noted, however, that Proinversión has made progress in recent years on several of the fronts studied here. For example, implementing availability payments (PTAR Puerto Maldonado, in the award phase); the ongoing production of a Financial Structuring Guide; proposing a new Regulation of Operations and Functions of the entity that advances in the transition towards a strengthened matrix structure; and offering the first University Extension Course on PPPs and Asset Projects. Likewise, some of the gaps identified in the portfolio analysis of the last ten years have already been incorporated in the latest regulatory changes.

1.17 These steps are important as they begin to point the way in the right direction towards a more mature Peruvian PPP program that is closer to international benchmarks such as the United Kingdom, Canada, Chile, and Colombia.

Key Risks

1.16 The following key risks arise from the risks of:

- Early Termination.
- Social opposition related to demand and Market risk.
- Financing.
- Land acquisition,
- Licenses and permits.

Risk of early termination due to causes of the Grantor: Refers to events in which the contracting authority fails to comply with its obligations generating a termination of the contract, or events in which the contracting authority decides to terminate it unilaterally.

Risk of social opposition preventing the project from receiving revenue from the investment: This refers to events in which social opposition, for example, through demonstrations or protests, prevents the project from operating and receiving revenue from the investment already made.

Financing interest rate risk: This refers to the possible variation of the financing cost between the bid offer date, when the investor fixes the financing cost vis-à-vis the contracting authority, and the effective date of financial closing, when the financing cost can actually be fixed.

Land transfer risk: refers to possible delays and cost overruns that may occur in the land acquisition process, including land purchase and utilities permits and coordination.

Risk of Licenses and Permits: refers to the possible delays that may arise from obtaining the authorizations required by different governmental entities.

2 Alternative Approaches

Objective

2.1 Through the development of this task, the objective is to identify how the key areas of research mentioned in the Diagnosis (above) are addressed in PPP programs of regional peers or with a high degree of maturity, in order to formulate recommendations that will help Peru maximize efficiency and value for money of projects with private participation.

Methodology of Analysis

Comparator Programs

2.2 The international programs chosen for the analysis of comparison and alternative approaches are as follows:

- **Mature PPP** programs that have gone through successive iterations of their program and whose preparation and contracting processes are firmly established and integrated, allowing for a constant pipeline of projects to meet infrastructure needs. Such countries are:



United Kingdom



Canada

- **Regional peer PPP programs**, which have had important developments in their programs over the last 10-15 years and have important points in common both in cultural context and in terms of institutional and legal framework with Peru. These countries are:



Chile



Colombia

Areas of Analysis

2.3 The areas to be investigated are as follows:

1. Alternative approaches to risk allocation with the objective of achieving a more balanced bankability, focusing on key risks (see previous section).
2. Approaches to project payment mechanisms that may allow for risk transfer with limited or no recourse required from the State.
3. In relation to opportunistic bids, the following will be investigated:

- Approaches to contracting strategies, such as programs and/or competitive dialogue and market participation in order to improve competition and the technical quality of bids.
 - Approaches to the evaluation of technical proposals in competitive bidding.
4. In addition, to strengthen the **procurement framework and practices**, we will research international comparators:
- Working structures that allow for knowledge transfer and project feedback, as well as capacity building.
 - Mechanisms to protect projects from political changes.



Sections of the Analysis

2.4 The analysis of the identification of alternative approaches and, therefore, of gaps will be carried out in two parts:

- First, through the **Comparative Analysis of Alternative Approaches**, which describes how the same area is approached in each of the international comparison programs.



The sources of information for this comparative analysis are as follows:

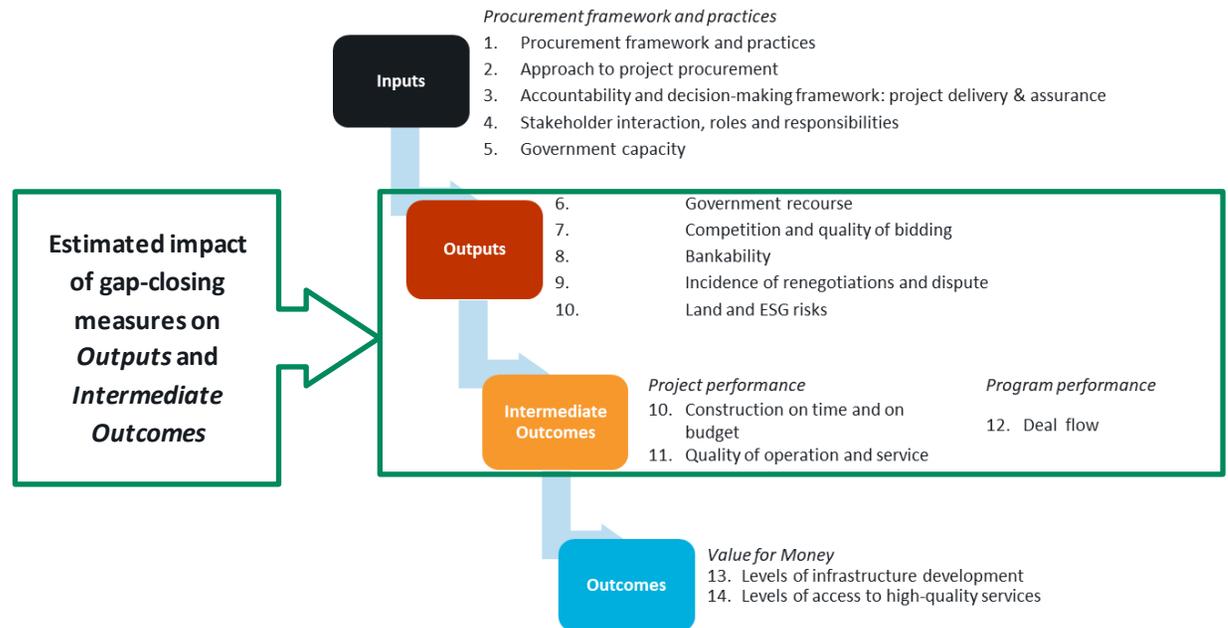
International Comparator Program	Source
<p>Colombia</p> 	<ul style="list-style-type: none"> Política de Manejo de Riesgo Contractual del Estado para Procesos de Participación Privada en Infraestructura Conpes 3107 Conpes 3107 Proyectos Viales bajo el Esquema de Asociaciones Público-Privadas: Cuarta Generación de Concesiones Viales Conpes 3760

	<ul style="list-style-type: none"> Interview with Camilo Jaramillo, ANI's ex vice-president of structuring
<p>Chile</p> 	<ul style="list-style-type: none"> Dirección General de Concesiones Chile Concesiones de Obras Públicas en Chile 20 AÑOS Priorización de Riesgos en Proyectos de Concesiones Viales en Chile - 2019 Interview with Germán Moncada, Chief Airport Project Department - Ministerio de Obras Públicas
<p>United Kingdom</p> 	<ul style="list-style-type: none"> Green Book and supplementary guidance on risk Management of risk in government: framework Optimism Bias Methodology Various sector specific guidance Interview with Matt Bull, ex World Bank GIF's deputy head, PwC Assistant Director.
<p>Canada</p> 	<ul style="list-style-type: none"> PPP Canada – The Canadian Council for Public Private Partnerships. Knowledge Centre publications:

	<ul style="list-style-type: none"> P3s: A Process Guide for Public Sponsors P3s: What the World Can Learn from Canada Interview with Mark Liedemann, Infrastructure BC's CEO <p>Publications such as:</p> <ul style="list-style-type: none"> April 2014 Discussion Paper: Methodology for Quantitative Procurement Options Analysis August 2013 "Delivering value through public private partnerships at home and abroad", Conference Board of Canada January 2010 Dispelling the Myths A Pan-Canadian Assessment of Public-Private Partnerships for Infrastructure Investments
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- Second, by the **Identification of Gaps, Proposal of Measures to Close these Gaps and Estimation of the Impact of the Measures**, we:
 - describe Peru's current situation in each of the areas analyzed above,
 - indicate whether or not there is a gap with respect to the practices of international programs,
 - propose measures to close the existing gaps.
 - describe the impact of such measures with respect to the Outputs and Intermediate Outcomes in the Peruvian PPP program, as shown in the adjacent figure.

and finally, the importance of such measures and the term in which they should be carried out are established.



Comparative Analysis of Alternative Approaches

Benchmarking - Risk Allocation						
Area	United Kingdom 	Canada – British Columbia 	Chile 	Colombia 	Peru 	
Early termination for causes attributable to the grantor	<p>The compensation principle is based on leaving the investor no better or worse off, compensating it in such a way that it is in the same situation it would have been in if the contract had not been terminated.</p> <p>The methodology is determined at the time of bidding and is part of the bidders' proposal. It can be:</p> <ol style="list-style-type: none"> 1. Base case target IRR. 2. Discounted future cash flows 3. Market value <p>The methodology is applied in both construction (for the built portion) and operation.</p> <p>This has been the result of the evolution of the PPP framework in the country. Initially, no compensation was given to the private party, which increased the risk and, consequently, the cost of the project.</p>	<p>The compensation principle is based on leaving the investor no better or worse off, compensating it in such a way that it is in the same situation it would have been in if the contract had not been terminated.</p> <p>The compensation methodology recognizes future cash flows discounted at a rate determined in the contract, both in construction (for the constructed portion) and in operation.</p>	<p>The compensation principle is based on leaving the investor no better or worse off, compensating it in such a way that it is in the same situation it would have been in if the contract had not been terminated.</p> <p>The compensation methodology recognizes future cash flows discounted using a formula and rate determined in the contract. The formula is adjusted according to the stage, construction, or operation, to recognize what is actually invested.</p>	<p>The compensation principle is based on leaving the investor no better or worse off, compensating it in such a way that it is in the same situation it would have been in if the contract had not been terminated.</p> <p>The compensation methodology recognizes future cash flows through settlement formulas included in the contract and at a rate equivalent to the WACC of the project.</p> <p>The contract also includes a table indicating the percentage to be compensated depending on the progress of the work, in the event that completion is at the construction stage</p>	<p>In the event of early termination, mainly the construction book value (VCNI i.e. the cost recorded in the balance sheet), is offset. The cost of capital is not recognized in its entirety, affecting the investor.</p>	
Social opposition to the	<p>The risk is very low, almost non-existent, as most PPP projects are</p>	<p>The risk is very low, almost non-existent, as most PPP projects are</p>	<p>The risk is public, and the State is liable for what has not been paid.</p>	<p>All toll risk is public, therefore, the revenues foregone are rewarded by</p>	<p>The risk is transferred to the Concessionaire,</p>	

<p>impossibility of collecting tariffs</p>	<p>remunerated with availability payments.</p> <p>The risk of social unrest is generally mitigated by fairly strict rules of public consultation with communities prior to the start of the project, which mitigates the risk of opposition.</p> <p>In the road sector there is only one road with tolls for the concessionaire (M6), where the concessionaire is free to determine the value of the toll according to demand: market regulation.</p>	<p>remunerated with availability payments.</p> <p>The risk of opposition has arisen, but in relation to environmental issues. However, the contractual framework requires that if the Concessionaire wants to be compensated for the damage suffered, it must file a lawsuit and a judge in a matter of days will rule on the damage caused to the Concessionaire and order the corresponding compensation.</p>	<p>There are several contracts with guaranteed minimum revenues that cover the risk of demand. In the road sector, if vehicles circulate, but do not pay, each toll has counters that identify how many vehicles circulated without paying, and the State compensates for this.</p>	<p>the State through a pre-established contractual formula.</p> <p>If this risk is not clearly transferred to the public in the contract, the private sector does not invest in the project.</p>	<p>and although there are cases where the grantor must compensate, the mechanism is not clear.</p> <p>The event is generally defined as force majeure, so in the event of early termination the compensation is also the book construction value of the intangible (VCNI-book construction value of the intangible).</p>
<p>Financing risk (interest rate variation between commercial close and financial close)</p>	<p>The commercial closing and the financial closing occur at the same time, or at most 6 months apart, so it is a risk assumed by the private party.</p> <p>The reason for the above is because the issues of land acquisition, licenses, design approvals, etc., are mostly done during the procurement stage and are in the hands of the State.</p>	<p>The commercial close and the financial close occur at the same time, or at most 6 months apart, so it is a risk assumed by the private party.</p> <p>The reason for the above is because land acquisition issues are mostly during the procurement stage and on behalf of the State.</p>	<p>All financial risk is assumed by the private party, even if more than 6 months elapse between commercial closing and financial closing.</p> <p>The reason for the above is because the identification of land and the budget for its acquisition are mostly defined at the project preparation stage.</p>	<p>All financial risk is assumed by the private party. However, financial closings are reached relatively quickly, maximum 18 months.</p> <p>This is perceived as an opportunity to create a secondary market for the purchase and sale of early stage projects, moving from the hands of builders to long-term investors, at least for the 4G concessions.</p>	<p>All financial risk is assumed by the private party.</p>

<p>Land acquisition</p>	<p>Land acquisition and transfer are the responsibility of the State. In most cases, most of the land is acquired prior to award. There is the possibility of expropriation.</p> <p>Licensing and permits coordination is in charge of the State, everything is identified and managed from the prefeasibility and feasibility studies.</p>	<p>Land acquisition and transfer are the responsibility of the State. Legally, this obligation cannot be transferred to the private party. In most cases, most of the land is acquired prior to adjudication.</p> <p>There is the possibility of expropriation.</p> <p>The private party is in charge of clearing the land from public service utilities, and if this is not possible, the government assumes the task and the risk.</p>	<p>The land risk responsibility of the State and necessary lands are almost completely identified in the project studies and indicated in the contract. The expropriation framework means that the State can take possession of the land and the owner can appeal the value, but access to the land is guaranteed in an expeditious manner. The private party provides liquidity for the acquisition of these properties and the State repays.</p> <p>Regarding utilities networks, the private party is in charge of doing all the adaptation works. Then, it charges the public utilities for such works. In both cases, the risk of cost overruns is shared with the State.</p>	<p>The risk is shared with the private party, through the figure of Property Management: the private party carries out all the management of the purchase of the property on behalf of the State.</p> <p>If the private party is unable to purchase the property, the figure of expropriation is used. The project can start construction with 40% of the land.</p> <p>The concessionaire is also in charge of managing the removal of utilities network in coordination with the service companies.</p> <p>The risk of cost overruns in both cases is mitigated through the creation of special subaccounts.</p>	<p>The risk is responsibility of the State, the regulation allows to entrust management tasks to the private sector.</p>
<p>Licensing and Permits Coordination Risk</p>	<p>Licenses and permits are responsibility of the State. They are practically completed at the time of award. Project preparation processes are very strict. Everything is identified and managed from the pre-feasibility and feasibility studies.</p>	<p>Depends on the type of infrastructure, but in general it moves forward like this: Vertical (e.g. hospitals): Re-zoning permits are responsibility of the State. Construction/development permits are responsibility of the private sector. Horizontal (e.g. highways): Land and environmental approvals are responsibility of the State; however, environmental obligations are transferred to the private party with a maximum cap.</p>	<p>The risk is borne by the private party. In the case of highways, there is a maximum limit of environmental mitigation works that the private party assumes, after a first limit, the risk is shared equally. If that first cap is exceeded, the state assumes everything after that. However, in the case of airports, the environmental qualification evaluation must be obtained by the state, and the environmental qualification resolution is delivered to the bidders.</p>	<p>The risk is borne by the private party.</p>	<p>The risk is borne by the private party.</p>

Benchmarking - Resources Required from the State

Area	United Kingdom 	Canada – British Columbia 	Chile 	Colombia 	Peru 
Payment Instruments	Availability payments mainly, Tariffs in some cases.	Availability payments mainly, Tariffs in some cases.	Payment mainly through tariffs. The figure called Total Concession Income (ITC) is used. The duration of the concession is tied to this amount.	Combination of availability payments, used to make the project financially viable, and present value of revenues received from tariffs. The duration of the concession is tied to this amount.	RPICAO (mainly in transportation and water-sanitation) and tariffs (mainly in energy and telecommunications). Availability payment has been implemented since 2020 in several projects such as PTAR Puerto Maldonado, and in mechanisms with a mixed scheme such as the Huancayo-Huancavelica Railway, which is about to be awarded.

Benchmarking - Opportunistic or Artificially Low Offers

Area	United Kingdom 	Canada – British Columbia 	Chile 	Colombia 	Peru 
Technical evaluation of bids Involvement with the private sector for improvement	<p>Typically, technical aspects are weighted 60-70% with price weighting 30-40%. Some key features are as follows:</p> <ul style="list-style-type: none"> Technical proposals are evaluated first before financial (price) proposals are opened to avoid any bias in the technical evaluation Technical criteria: Each technical sub-criterion tends to have a minimum score (or threshold) below which bidders are disqualified on the basis of non-compliance. Price criteria: A maximum threshold is often defined, which has the effect of reducing the variance in bids around the 	<p>The first step is an invitation to the private sector to make a technical offer, which must be judged with substantial satisfaction, in order to move on to financial evaluation.</p> <p>Additionally, in cases of vertical infrastructure (e.g. hospitals, schools), the path of acceptable equivalence can be taken, a type of competitive dialogue, whereby bidders can propose different ways of meeting technical specifications. These are confidential and are discussed one-on-one with the bidder prior to the selection of the preferred bidder</p>	<p>The first step is a technical evaluation of "pass or fail", and they score only to resolve ties in economic offers.</p> <p>Chile did a technical and economic evaluation with weighted scoring years ago but gave it up because it opened space for controversy of subjective qualifications.</p> <p>The economic evaluation is based on the best price.</p>	<p>The first step is a technical evaluation of "pass or fail", no technical evaluation is made to open space for controversy of subjective qualifications.</p> <p>The economic evaluation is based on the best price.</p> <p>Opportunistic bids are discouraged through a dispersion analysis</p>	<p>The first step is a technical evaluation of "pass or fail". Technical evaluation is not done to open space for controversy of subjective qualifications.</p> <p>The economic evaluation is based on the best Price.</p>

	<p>mean and reduces the likelihood of artificially high or artificially low bids. It is important to note that the UK uses the competitive dialogue procedures during tenders where each bidder is allowed to negotiate a technical solution to the project which, in turn, could be fed into final tender documents. This is an intensive and collaborative form of negotiation, which, although costly and time consuming, allows the government and the private sector to fully understand the merits of the technical solution and its value for money. In effect, the government can take the best elements of each bidder's proposals and feed it into the final bidding requirements and thus exploit the innovations of all bidders. This procedure is now firmly established in the UK and EU: it has slightly lengthened procurement processes, but slightly shortens the time between the award of bids and financial close, and more importantly has longer term benefits around greater certainty at the construction stage.</p> <p>Use unsolicited proposals is not incentivized.</p>	<p>Once they pass this evaluation, they are invited to make an economic proposal. In this case, the lowest bidder is selected.</p> <p>It is important to note that Canada uses the competitive dialogue procedure during tenders where each bidder is allowed to negotiate a technical solution to the project which, in turn, would be reflected in the final terms of the contract. This is an intensive and collaborative form of negotiation, which, although costly and time consuming, allows the government and the private sector to fully understand the merits of the technical solution and its value for money; as well as encouraging the proposal of innovative and alternative approaches to the technical solution of the same. This procedure, while it may lengthen procurement processes, shortens the time between bid award and financial close, and more importantly has longer term benefits around greater certainty and quality in the construction phase.</p> <p>Use unsolicited proposals is not incentivized.</p>	<p>Opportunistic bids are not a concern because there is a sufficiently large and sustainable pipeline that balances supply and demand for projects.</p> <p>Although there have been unsolicited proposals at this time, incentives are provided for projects that are innovative.</p>	<p>formula that identifies abnormally low bids and disqualifies them. Although there have been unsolicited proposals, these complement the PPP program that the State generates by itself (4th and 5th generation of concessions)).</p>	<p>Methods for detecting and eliminating artificially low bids have to be included in the bidding terms of reference, on a case-by-case basis and not in a standardized manner.</p> <p>It is important to note that Proinversión recently included a minimum price mechanism in the evaluation of project bids to eliminate possible unrealistic bids.</p>
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Benchmarking – Upstream PPP Framework					
Area	United Kingdom 	Canada – British Columbia 	Chile 	Colombia 	Peru 
Institutional Capacity: Knowledge Transfer	<p>Infrastructure & Projects Authority (IPA) Government entity under the Ministry of Finance.</p> <p>It plays an advisory role to grantors, contracting authorities, and provides oversight and support at all stages of the project life cycle: structuring, contracting, and implementation.</p> <p>Knowledge transfer is done informally and formally:</p> <ul style="list-style-type: none"> - Informal, through project meetings and aided by the fact that IPA deploys its staff to ministries for advice. - Formal, through the compilation of lessons learned in official reports available to the public. <p>The country has a repository in which the most important project documents are compiled. It is publicly accessible.</p>	<p>Infraestructura BC. Commercial company whose sole shareholder is the Ministry of Finance.</p> <p>It plays an advisory role to grantors, contracting authorities, and provides oversight and support at all stages of the project life cycle: structuring, contracting, and implementation.</p> <p>Knowledge transfer is done informally and formally:</p> <ul style="list-style-type: none"> - Informal, through project meetings between Infra BC and project owners. - Formal, through mechanisms called: 'P3 Operational Audits', which have just been implemented. These are intended to collect lessons learned. They are not public. Y 'Monitoring Panel': independent group of people chosen by the Ministry of Trans. to monitor and manage the contractor and the contract. Semi-annually, they report to the ministry. <p>The province has a repository where the most important project</p>	<p>Dirección General de Concesiones. Division of the Ministry of Public Works of Chile.</p> <p>It performs all the functions and manages the entire project life cycle: structuring, contracting, and implementation.</p> <p>Knowledge transfer is done informally through project meetings between the different areas of the Directorate's work divisions. Being under the same entity facilitates this process of gathering and continuity of knowledge and experience.</p> <p>There are no formal knowledge transfer and feedback systems.</p> <p>The country has a repository where the most important project documents are compiled. It is publicly accessible.</p>	<p>Agencia Nacional de Infraestructura (ANI). National autonomous agency attached to the Ministry of Transportation.</p> <p>It performs all functions and manages the entire life cycle of transportation projects: structuring, contracting, and implementation.</p> <p>Knowledge transfer is done informally through project meetings between the different areas of the Directorate's work divisions. Being under the same entity facilitates this process of gathering and continuity of knowledge and experience.</p> <p>There are no formal knowledge transfer and feedback systems.</p> <p>The country has a repository where the most important project documents are</p>	<p>Proinversión. Autonomous national agency attached to the Ministry of Economy and Finance.</p> <p>It performs the functions and manages the preparation and structuring stages. (The preparation stage only if delegated to it).</p> <p>Knowledge transfer is done informally, but in a limited manner. This is mainly due to the fact that the structuring agent (Proinversión) is different from the project owner (the ministries), and there are no formal spaces for knowledge transfer and feedback.</p> <p>As for a document repository, Proinversión consolidates the main structuring and transaction documents on its website. Some regulators, such as OSITRAN, also have a virtual repository of contracts, addenda, and</p>

		documents are compiled. It is publicly accessible.		compiled. It is publicly accessible.	management reports. But this is not the case in all sectors. Likewise, the MEF has a national registry of PPPs, but it is not updated and is not publicly accessible, or at least not to the relevant entities.
Capacity Building and Staff Retention	<p>People are recruited from the private sector to provide strategic (and technical, when necessary) advice with strong employment benefits packages (particularly with regard to pensions and salaries).</p> <p>The reason for this is so that the government has access to the mindset of the private sector and a better understanding of the private sector's objectives. In turn, this improves the negotiation strategy.</p>	<p>People are recruited from the private sector to provide strategic, rather than technical, advice at competitive salaries.</p> <p>It is an interdisciplinary group, which is reported to be its greatest strength. There are opportunities for career advancement.</p> <p>The reason for this is that the government has access to the mindset of the private sector and a better understanding of the private sector's objectives. In turn, this improves the negotiation strategy.</p>	<p>There are no special incentives for retaining or attracting talent.</p> <p>There are opportunities for promotion and career opportunities within the entity.</p>	<p>People are recruited from the private sector for management and strategic advisory positions, with competitive salaries.</p> <p>There are opportunities for promotion and career opportunities within the company.</p>	<p>There are no special incentives for retaining or attracting talent. Although two points should be highlighted: 1) in 2017 a new salary scale was approved for Proinversión and 2) the creation of the matrix system proposed in the new Proinversión Operations and Functions Regulation, which is yet to be implemented, should lead to a full implementation of the new salary scale and positions in the organizational chart with reinforced profiles.</p> <p>Likewise, in 2021, Proinversión's First University Extension Course was launched, which is aimed at attracting young talent from the last semesters of university to the institution</p>

					<p>and thus replicating practices of other institutions such as the Central Reserve Bank of Peru.</p> <p>A constant concern among civil servants about being investigated or involved in acts of corruption that may have occurred at other levels discourages and limits the capacity of public officials.</p>
<p>Protection to of government changes to projects</p>	<p>The political and administrative structure of the country gives the government and legislators the power to approve projects and make changes when necessary.</p> <p>However, project cancellation/change is very costly (politically and financially), which are strong disincentives to carry out projects.</p> <p>Also, government terms are long (often exceeding 5 years), which allows projects to be initiated and completed in the same legislature.</p>	<p>The political and administrative structure of the country gives the government and legislators the power to approve projects and make changes when necessary.</p> <p>However, project cancellation/change is very costly (politically and financially), which are strong disincentives to carry out projects.</p>	<p>The government has the power to make changes or cancellations only to new projects when necessary.</p> <p>However, projects that have already been awarded or are to be re-bid cannot be changed or cancelled by a new administration.</p>	<p>The government has the power to make changes or cancellations to projects when deemed necessary.</p> <p>However, the government is aware of the efficiency and quality of ANI's management, and therefore, the projects under its structuring and contracting are less subject to cancellations or substantial changes.</p>	<p>The government has the power to make changes or cancellations to projects when deemed necessary.</p> <p>There are no formal or informal mechanisms to shield the pipeline of projects from political changes, as well as substantial changes to projects in structuring, even at an advanced stage.</p>

2.5 Having described how the same challenge areas of the Peruvian PPP program are addressed in each of the international comparator programs, Peru's current performance in each of these areas is then examined in relation to international practices in order to identify areas for improvement and appropriate measures to close them.

Identification of gaps, proposal of measures to close these gaps and estimation of the impact of the measures

2.6 The recommended time frame for each measure is described by the following figures



Risk Allocation				
Gap	Measures	Impact on Outputs and Intermediate Results	Importance	Term
<p>Early termination due to the grantor's cause</p> <p>Peru is not aligned in the treatment of this event both with its regional peers and with international comparator programs.</p> <p>Under the current Peruvian scheme, the State pays less in the event of early termination (for any reason) than the contractually agreed price since the entire financing cost is not recognized.</p> <p>The above applies except in payment schemes with RPI, since due to the irrevocable and unconditional nature of these instruments, the payment is not affected, even if the contract is terminated.</p>	<p>Incorporating compensation under 'no better-no worse' principle for early termination events due by the grantor in PPP contract models and financial Structuring Guide (currently under development)</p>	<p>(6) Resources required from the State: Eliminates the need to mitigate this risk through other contractual channels, such as through the use of instruments like the RPI.</p> <p>(7) Competition and quality of bids: Gives confidence to the market that incentives are aligned with the public, encouraging the participation of top-tier international investors, and attracting financiers with a long-term investor profile.</p> <p>(8) Bankability: Promotes the real project finance market without, or with limited recourse to the government and the investor. By reducing the level of risk, the project benefits from a lower cost of financing.</p> <p>(9) Incidence of renegotiations and disputes: by having aligned incentives, the scope for renegotiations and disputes is reduced for both parties as they have the right incentives to fulfil their obligations.</p>	<p>Salidas Resultados Intermedios</p> <p>High</p>	<p>Immediate</p> <p></p>
<p>Social opposition preventing recovery of investment</p> <p>Peru is not aligned in the treatment of this event with both its regional peers and international comparator programs.</p>	<p>Strengthening the communication and coordination of the social offices of ministries and SASA to improve the early management of social issues that allow to mitigate</p>	<p>(6) Resources required from the State: Eliminates the need to mitigate this risk through other contractual channels, such as through the use of instruments like the RPI. It maximizes the user's source of payment, reducing the need to access government subsidies.</p>	<p>High</p>	<p>Immediate</p> <p></p>

<p>Mature PPP programs generally do not have this risk since most PPP projects are paid through availability payments, and the demand risk is retained by the State.</p> <p>However, in regional peer PPP programs this risk is clearly assigned to the State who is responsible for resolving the situation and compensating the user for the effects</p>	<p>risk of social opposition and strengthen the sources of income of the project, hence reducing the risk the need for recourse to the State</p>	<p>7) Competition and quality of bids: Gives confidence to the market that incentives are aligned with the public, encouraging the participation of top-tier international investors, and attracting financiers with a long-term investor profile. Provides tools to the investor to improve the estimation, mitigation and management of uncertainties associated with social and economic variables, other than project performance variables.</p> <p>8) Bankability: Promotes the real project finance market without, or with limited recourse to the government and the investor. By reducing the level of risk, the project benefits from a lower cost of financing.</p> <p>(9) Incidence of renegotiations and disputes: by having aligned incentives, the scope for renegotiations and disputes is reduced for both parties as they have the right incentives to fulfil their obligations.</p>		
<p>Interest rate risk (variation of interest rates between commercial close –CC- and financial close –FC-)</p> <p>Peru is aligned in the treatment of this risk with comparator programs; however, the context differs in each case:</p> <p>Mature PPP programs generally do not have this risk as the time between CC and CF is a maximum of 6 months (time for which rates can be set). This is because the more complex land investments and licenses start to be advanced from the preparation stage.</p> <p>In regional peer PPP programs, although the risk is assigned to the private party, the following should be considered</p>	<p>Share this risk between for projects with timeframe between CC and FC longer than 6 months.</p> <p>However, this is a short-term/medium-term measure. In the long term, efforts should be made to speed up financial close timeframes, through measures such as those indicated in the following sections.</p>	<p>(6) Resources required from the State: Reduces the cost of financing the project, which in turn reduces the need for State resources.</p> <p>(7) Competition and quality of bids: Gives the investor tools to mitigate the effects of uncertainty associated with project pre-construction times. Allows the involvement of debt financiers in the bidding stage, improving the level of due diligence of the project.</p> <p>(8) Bankability: Promotes the real project finance market with no, or limited, recourse to the government and the investor. By involving the debt finance market from the bidding stage, the scope for future bankability problems is reduced.</p>		

<ul style="list-style-type: none"> • In Chile, there is less uncertainty in the timing of land release derived from the legal framework of expropriation. • In Colombia, the transfer of this risk to the private sector has promoted the secondary market for the purchase and sale of projects, which may be indicative of the value that the State is leaving on the table through this approach. <p>In any case, there are two important factors to keep in mind:</p> <ul style="list-style-type: none"> - The times between CC and CF in Peru are on average longer than in the region. (See Annex 1) - The lack of certainty in the post-COVID financial market increases the uncertainty of market rates and therefore the market's resistance to assume the risk. 				
<p style="text-align: center;">Land availability</p> <p>Peru is in line with international comparators in terms of risk allocation, however, mitigation mechanisms differ mainly in the following:</p> <p>Mature PPP programs invest in land release from the preparation stage and have agile mechanisms and institutions for expropriation and utilities network coordination.</p> <p>In the PPP programs of regional peers, Chile's expropriation legal framework stands out, guaranteeing the expeditious taking of possession and utilities network coordination. In Colombia, where the regulatory framework is more similar to Peru's, the</p>	<p>Strengthen land acquisition and identification as follows:</p> <ol style="list-style-type: none"> 1. Improve the early management of land identification and its conditions, preliminary work on pricing, the availability of budgets (e.g. in a fund), exercise of eminent 2. Assess how to improve management of the process to be carried out by the private sector on behalf of the State 	<p>(7) Competition and quality of bids: Eliminating or substantially mitigating land and utilities network coordination risk attracts investors with a long-term financial profile, who demand greater certainty in this regard from projects. Allows debt financiers to be more effectively involved in the bidding stage, which improves the level of project due diligence.</p> <p>(9) Incidence of renegotiations and disputes: Reduces disputes over State defaults.</p> <p>(11) On-time and on-budget construction: Reduces potential cost overruns and construction delays. In addition, early land planning mitigates the risk of social opposition, which has an impact on the reputational risk of the contracting entity and thus reduces political risk/exposure for the government.</p>	<p>High</p>	<p>Long</p> <p>○</p>

<p>approach has been to assign management tasks to the private sector with generally satisfactory results. Both programs use private resources to finance these properties and utilities network coordination.</p>				
<p>Licenses and permits Risk</p> <p>Peru is aligned and on par with international comparators.</p> <p>However, in mature PPP programs this risk is mitigated through early and proactive management by the grantors or contracting authorities, especially the more complex ones such as environmental ones, from the preparation stage.</p>	<p>1. Assign license and permit related risks to who best positioned to handle them, according to the characteristics of the project.</p> <p>2. Make legislative changes required to exempt projects in the PNIC from requiring some licenses such as urban enablement licenses, building, construction compliance, and factory declaration.</p>	<p>(7) Competition and quality of bids: Eliminating or substantially mitigating the risk of complex licenses such as environmental and archeological ones attracts investors with a financial profile that demand greater project certainty in this regard.</p> <p>It allows debt financiers to be more effectively involved in the bidding stage, which improves the level of due diligence of the project.</p> <p>(9) Incidence of renegotiations and disputes: Reduces disputes over private party defaults and/or delays in approvals from other government entities.</p> <p>(11) On-time and on-budget construction: Reduces potential cost overruns and construction delays by identifying environmental and archaeological liabilities in a timely manner.</p>	<p>High</p>	<p>Immediate</p> <p style="color: red; font-size: 24px;">●</p>

Government Recourse

Gap	Measures	Impact on Outputs and Intermediate Results	Importance	Term
<p>Payment Instruments</p> <p>The use of RPI schemes in the water, sanitation and transport sectors means that Peru is not in line with international comparators.</p>	<p>Because of the current depth of the local finance market, promote the transition of projects of around USD\$300M to Project Finance schemes, and train relevant sectors and ministries in the use of this scheme and payment mechanisms such as PPDs.</p> <p>Clearly identify project-specific funding sources for each sector, as well as potential payment instruments applicable to each source to reduce state recourse (100% RPICAO co-financing). For example, PPD, user fees and mixed schemes that minimize the use of the State.</p>	<p>(6) Resources required from the State: Reduces the need to rely on State payment sources and reduces the risk exposure of the State, which is only obligated to pay for the availability of the service received.</p>	<p>High</p>	<p>Immediate</p> <p style="color: red; font-size: 24px;">●</p>

<p>Mature PPP programs generally use the availability payment scheme. In the PPP programs of regional peers, the project's own cash generation via the user is prioritized and availability payment schemes are used as a source to make the project financially viable (VFG).</p>	<p>Evaluate the maximization and empowerment of auxiliary funding sources that generate long-term resources (e.g. Recovery of real estate capital gains) to complement those specific to the project (e.g. tariffs)</p>	<p>(7) Competition and quality of bids: Incentivizes lenders to do stricter due diligence on projects, indirectly improving project quality.</p>		<p>Medium</p> 
	<p>Evaluate the creation of a strategic program/framework, at the sector or project level, which facilitates access to mechanisms that improve the credit quality of payment instruments, such as an available option that facilitates transit to project finance structures</p>			
	<p>Promote the development of other types of financings such as the local banking and institutional financial market, as well as alternative financing such as green financing, through an investment promotion program</p>			
	<p>Bring ESG's regulatory and practical framework to international standards. (More detail below in Section 4 of this document)</p>			

Opportunistic or Artificially Low Bids				
Gap	Measures	Impact on Outputs and Intermediate Results	Importance	Term
<p>Technical evaluation of technical bids and involvement with the private sector for their improvement</p> <p>Peru is in line with its regional peers in the sense of a pass/fail evaluation of the technical bids, followed by an evaluation of the economic bids in which the one that represents the best price is selected.</p> <p>Mature PPP programs use a different approach to bid evaluation. The United Kingdom scores and gives greater weighting to the technical evaluation. Canada, on the other hand, uses a kind of competitive dialogue at the</p>	<p>Strengthen the criteria according to which the 'pass/fail' technical assessment is carried out in such a way that significant differences can be identified proposals and disqualify those that do not pass the substantial satisfaction assessment of the technical solution</p>	<p>(7) Competition and quality of bids: Gives more confidence to first-tier bidders who prioritize a good technical solution and have a long-term interest in the asset. Promotes the presentation of innovative ideas that would eventually lead to improved service delivery and cost reduction.</p> <p>(9) Incidence of renegotiations and disputes: Reduces scope renegotiations after contract award.</p> <p>(11) On-time and on-budget construction: Reduces potential cost overruns and construction delays due to unclear technical conditions.</p>	<p>High</p>	<p>Immediate</p> 

<p>technical evaluation stage and then asks for economic bids from those who pass the technical evaluation.</p> <p>At this point it is important to recognize that the local context is a critical factor, and the relevance of transparency and a history of corruption play an important role in the direction taken for the technical evaluation.</p>	<p>Evaluate in more detail the option of using competitive dialogue, analyzing, for example, what requirements are necessary to develop it in the country, in which cases it is appropriate, and which support systems should be in place for its use.</p>		<p>Medium</p>	<p>Medium</p> 
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Upstream PPP Framework				
Gap	Measures	Impact on Outputs and Intermediate Results	Importance	Term
<p>Transfer of Knowledge and Expertise</p> <p>Peru, like its regional peers, does not have formal knowledge and experience transfer systems.</p> <p>The country is aligned with all comparators in the informal knowledge transfer system, but its scope is more limited due to the separation of entities that carry out project contracting and implementation functions.</p> <p>The Peruvian PPP program is not aligned with international comparators because it does not have repositories of main project documents in a public and accessible manner under a consolidated platform. Currently, the information is dispersed among Proinversión, MEF, Ministries and regulators.</p>	<p>Project Documentation. Develop a technological platform with a categorization and storage scheme for all documentation created and implemented to ensure immediate access to documentation, approvals, files, backups, among others, to improve project management and interagency coordination, and facilitate ex-post analysis of the projects. Alternatively, update and improve the PPP registry administered by the MEF and allow public access to it or at least to all institutions involved in the projects.</p>	<p>(8) Bankability: Allows quick access to project or historical project information by interested investors without having to make requests to various entities.</p> <p>(9) Incidence of renegotiations and disputes, and (10) Land and utilities network coordination risks / licenses and permits: Helps implement lessons learned to new projects during all stages of the life cycle, decreasing room for improvisation and lack of background knowledge.</p> <p>(11) On-time and on-budget construction: Helps implement mechanisms to anticipate future bottlenecks and act proactively for early mitigation.</p> <p>(12) Quality of operation and service: Helps to make ex post analysis and project supervision more effective.</p>	<p>High</p>	<p>Medium</p> 
	<p>Implement feedback committees between Proinversión and sectors.</p>			
	<p>Compilation of Lessons Learned. Design and establish systems that allow for the collection and management of knowledge</p>			

<p>Mature PPP programs also have formal systems for knowledge transfer and have begun to implement formal mechanisms for the collection and sharing of lessons learned.</p>	<p>acquired in the different stages of the project. (e.g., production of lessons learned reports). This can be shared only among relevant entities.</p> <p>Design and systematize socio-economic management indicators to monitor and quantify the impact of PPP projects in execution (ex-post evaluation of VfM). These can be included as part of the management oversight of PPP contracts.</p>	<p>(13) Transaction flow: Early mitigation of potential problems and learning from past mistakes will make the preparation and launch of projects to market faster and more efficient.</p>	<p style="background-color: #f08080; color: white; text-align: center; font-weight: bold;">High</p>	<p style="background-color: #f08080; color: white; text-align: center; font-weight: bold;">Immediate</p> <p style="text-align: center; color: red; font-size: 24px; margin-top: 10px;">●</p>
<p>Capacity building and staff retention. Peru is not in line with most international comparators, although in general all countries face challenges in retaining staff in the public sector.</p> <p>Mature PPP programs and Colombia's program recruit from the private sector through competitive employment benefits and career advancement prospects.</p> <p>However, in Peru, as in all international comparators, there are opportunities for promotion.</p> <p>One of the aspects that specifically affects the Peruvian context is the fear of officials to be investigated and/or involved in corruption issues.</p>	<p>Establish a PMO with technical assistance within the Ministries of Water, Education, Health, and Transportation to help these agencies streamline their high project portfolio that is being affected by their lack of technical capacity and resources.</p> <p>Train the institutions in the specificity of their roles and the use of their competencies, insisting on the limits of their functions.</p> <p>Due to the important portfolio of projects with a high and complex land component, provide the Ministry of Transportation and Communications with:</p> <ul style="list-style-type: none"> A technical assistance team to help improve land identification and acquisition processes, A special fund for early management of land identification and, if possible, land acquisition during project preparation. 	<p>(6) Resources required from the State: Promotes understanding of private sector preferences, which helps to make project commercial structures more innovative by reducing the need for State resources.</p> <p>(8) Bankability: By involving knowledgeable people from the private sector, it promotes the inclusion of private sector approaches to project preparation by anticipating and reducing future bankability problems.</p> <p>(12) Quality of operation and service: Helps make ex post analysis and supervision of projects more effective.</p> <p>(13) Transaction flow: Anticipation of problems and understanding of the private sector will make preparation and negotiations faster, thus making it faster to bring projects to market.</p>		

<p>Protection of projects from government changes</p> <p>Peru is in line with international comparators in that governments can make changes to projects if they wish, even within a government administration period.</p> <p>However, unlike Peru, all international comparators have strong political, financial, and economic incentives against such changes or cancellations.</p>	<p>Create the conditions to enable investment (in land, licenses and permits) from the preparation stage to align the incentives of outgoing administrations with those of incoming ones, so as to create an indirect commitment of the new rulers to the development of the projects.</p> <hr/> <p>Evaluate what tools can be included in the PPP framework to protect the pipeline and projects from political changes to ensure continuity. This study should include the analysis of aspects such as: what type of projects should be protected, under what conditions, what temporal space of protection to provide, and who would be involved.</p>	<p>(7) Competition and quality of bids: It gives confidence to the international market, which encourages the private sector to invest. It allows the creation of economies of scale for investors, which improves the quality of their technical proposals and lowers the cost of economic offers.</p> <p>8) Bankability: Since projects are less exposed to political risk, the cost of financing them is lower.</p> <p>(13) Transaction flow: Accelerates the production of projects, improving their preparation and bidding times, and streamlines Proinversión’s pipeline,</p> <p>(12) Quality of operation and service: Closes infrastructure gaps more quickly and efficiently.</p>	<p>Medium</p>	<p>Long</p> 
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3 Transition to alternative schemes to RPICAO

Introduction

3.1 As has been indicated throughout this study, one of the points that should be considered to increase the value for money of the PPP program in Peru is the transition to commercial structures in which there is limited or minimal recourse to the State and where the main source of payment arises from the service or infrastructure itself; or even, where if the State must supplement, strengthen or complement the sources of payment due to financial viability issues, it does so by basing payment on the availability and performance of the infrastructure or services.

3.2 As identified in the diagnostic chapter, the use of RPICAO type instruments has been used in sectors such as transportation and water

& sanitation as a mechanism to guarantee the bankability of projects, especially in the transportation and water & sanitation sectors. These instruments, however, by their nature, limit the real transfer of risk to the private sector, which does not assume the risk of availability or quality of the infrastructure. This is due to the fact that on the one hand, the PRI certificate is issued based on percentages of work progress, and the irrevocable and unconditional quality of the certificate means that once issued, both the capital and the financial cost (included in the value of the RPICAO) are paid regardless of whether the work is completed and/or its quality.

3.3 Therefore, one of the key aspects in the maturation of the Peruvian PPP framework is to encourage the use of payment instruments that allow an adequate transfer and/or retention of risk based on the basic principle of assigning them to those who are best able to manage and mitigate them, and that pay for the investment based on the availability and quality of the service. To this end, an analysis of the following is presented:

- What the main payment instruments in a Peruvian PPP project are

- What alternative payment instruments exist and can be used.
- What are the key changes needed for the promotion of Project Finance in Peru; and
- What the alternative sources of funding in Peru are
- How can the credit quality of payment sources be improved, and
- Some alternative sources of financing such as the local institutional market, domestic and international soles market, green financing, among others

Analysis of Payment Instruments, the Peruvian Case

3.4 Traditionally, the payment instruments for a project can be user payments via tariffs or government payments.

3.5 Government payment instruments are traditionally divided into three categories¹:

- Usage-based: e.g., tolls or performance-based subsidy
- Based on service/infrastructure availability and quality of service/infrastructure
- Subsidies at the front end based on achievement of milestones

¹ PPP Knowledge Lab – Payment mechanisms (02.2021)

3.6 The Peruvian PPP framework² considers the following payment instruments for construction investment:

- **Availability Payment (PPD)** based on the quality and availability of the service and subject to deductions/penalties for non-compliance with quality indicators. This instrument has begun to be used in projects that are currently being launched in the market.
- **Payment for Works (PPO):** Subsidy to the front based on the achievement of construction milestones, allowing to reduce the project's financing needs.
- **Remuneration for Investment (RPI):** Deferred subsidy based on the achievement of construction milestones. Requires financing because it is deferred.

3.7 RPI has been the most widely used mechanism as a State payment instrument, especially in the transportation and water and sanitation sectors. A detailed description of the

RPI mechanism is provided in the Portfolio and Deep Dive Evaluation Report.

3.8 However, there are particularities of this instrument that are relevant in the allocation of project risks:

- They generally remunerate 100% of the investment or are combined with PPO,
- The RPICAO (CAO work progress certificate) is issued as work progresses, traditionally 10% progress,
- The source of payment is a special State trust fund and any shortfall is guaranteed by the national government, and
- Each RPICAO is irrevocable and unconditional.

3.9 This structure therefore removes the project risks from the payment instrument because the financier is only assuming the sovereign payment risk. However, the market charges a premium for not being sovereign bonds in the strict sense, and going through the project, even though the RPICAOs are equivalent to irrevocable fixed-date sovereign debt securities.

3.10 The only risk for the financier is that the certificates are not issued on time and therefore the debt resources issued are not used, this risk is normally covered by a "make-whole" guarantee provided by the project sponsors, i.e. the financiers are not actually assuming additional risk to the sovereign risk.

3.11 The premium observed in the market over the sovereign rate on RPI bond issues in USD is on average 1.84 (average duration of 7 years see Annex A). This is the rate that the financial market charges the project. However, the cost of financing must be fixed by the private party before the public on the offering date when the private party still has no certainty about the cost of future financing, nor instruments to fix it due to the long terms and the uncertainty associated with its compliance. Consequently, the private must make a conservative assumption about the cost of financing, which has a very low probability of loss.

3.12 Thus, if the cost of real financing is lower than the supply hypothesis, which is likely since it is a conservative assumption, the private sector

² Resolución Directoral N° 005-2016-EF/68.01 Lineamientos para el Desarrollo de las Fases de Formulación y Estructuración en los Proyectos de Asociaciones Público-Privadas. Anexo B: Lineamientos para la elaboración del

Modelo Económico Financiero del Proyecto en la Fase de Estructuración.

gains (or loses, although this is unlikely) the difference between the rate assumed in the supply and the real rate. In this sense, the State ends up paying a higher financial cost than the real one offered by the market.

3.13 In addition, the investor's equity risk is limited to working capital until the issuance of each CAO, this risk being completely eliminated when that percentage of the work is completed and the RPICAO is issued. O&M costs are normally paid with the PMO (maintenance and operation payment) instrument. This structure is more in line with a public works project combined with an O&M contract and is attractive to investors with a construction profile.

3.14 The figure of the RPI has been very useful in guaranteeing the bankability of the projects, allowing access to the international capital market, and developing the local market.

3.15 However, as the country's PPP framework matures, it has become necessary to move towards the use of instruments that allow for a balanced transfer of risks. This, among other things, will allow:

- Alignment of incentives between the parties, with the private sector effectively having "skin in the game".

- Attract long-term investors with a financial profile, allowing access to institutional capital;
- Stimulate the real Project Finance market with local and international banks.

Alternative payment instruments

3.16 The Peruvian regulatory framework has already introduced alternative payment instruments, and in fact Proinversión is currently structuring projects with previously unused instruments such as PPDs.

3.17 In this regard, the following is recommended for the transition towards reducing reliance on RPI:

- **User payments:** continue with its application in those projects where it is feasible. That is, transferring the market risk when the risk can be managed by the private sector, as in the energy and telecommunications sector, or sharing the risk in other cases such as some projects in the transportation sector.
- **User payments combined with government payments (VFG):** These can still be used in those cases where part of the funds may come from user fees, but only partially, and existing funding gaps must be covered by the government. These combined schemes allow

the transfer of risk to the private sector and at the same time cover funding gaps.

- **User fees combined with risk-sharing mechanisms:** these combine user fee revenues with guarantees that share certain risks between the public and private sector should they materialize. The most common are minimum revenue guarantees that provide a floor on concessionaire revenues or "cap and collar" schemes that share both upside and downside risks by sharing profits and losses below or above specified levels. These mechanisms help leverage financiers who are prepared to accept a reasonable degree of risk.
- **Availability-based payments:** continue to promote the use of this type of instrument

3.18 It is important to highlight that implementing or encouraging this type of instrument will require more traditional Project Finance type financing, i.e. with project risk, especially in the transportation, water & sanitation sectors.

Alternative sources of funding

3.19 As mentioned above, there are two sources of financing: from the user or from the State. If a project has sufficient capacity to generate liquidity on its own, it must be

leveraged to reduce dependence on public treasury funds.

3.20 There are two ways to achieve this:

- Reduce the amount of investment required, capex.
- leverage the project's own sources; and/or
- improve credit quality or reduce the cost of financing.

Project-specific sources

3.21 In this case, the project is able to generate revenues through: a) the direct user, which are produced in the long term with the use of the infrastructure, or b) the indirect beneficiaries, which can materialize in the first line or in the long term.

User payments

3.22 A traditional source of revenue is the charging of a user fee for the use of the service. In some projects, such as energy and airports, this mechanism works very well; however, in the road transport sectors, toll collection has been threatened in recent years by social and political pressures.

3.23 This source should be protected and maximized under a clear government policy that shields it from political pressure and through

socialization activities with the communities to reduce protests.

3.24 In addition, ways should be sought to maximize this source with innovative collection mechanisms, for example, dynamic taxes on urban roads.

Auxiliary income

3.25 Some types of infrastructure, by their nature, allow for commercial exploitation, such as airports or urban transport stations. These sources should be leveraged in such a way that the benefits are received by both parties, reducing the need for state contribution, or maximizing their revenues.

Sources external to the project

3.26 **Land value capture:** This mechanism allows the public to access the benefits of land value appreciation through improved access to any type of infrastructure, including transportation, public services, public spaces, etc. This requires a successful urban planning process at the beginning of the project planning, the definition of the benefit zones and a good collection system. There are different mechanisms for accessing these resources:

- **Improvement contributions / levies:** taxes based on whether the individual benefits privately from a state activity.
- **Land readjustment:** real estate integration processes in which the owners of certain land cede it so that new projects can be carried out there, reconfiguring the urban sector.
- **Density bonus / rezoning:** increase in density given to developers in exchange for providing some type of public benefit.
- **Transfer of development rights:** landowners transfer development rights over their land, enabling them to move to areas where they want to encourage development.
- **Development exemptions and impact fees:** contributions in cash or in kind to enforce building rights.
- **Tax increment financing (TIF):** option that allows you to use tax surpluses in a specific development area.

Key changes to promote Project Finance

Motivation

3.27 Implementing alternative payment sources and instruments also requires seeking alternative financing structures that use them in the most efficient way while maintaining a balanced risk transfer. The complexity of these

structures requires structured financings that for infrastructure projects are known as Project Finance.

3.28 Pure project finance structures involve by nature the transfer and allocation of project risks among the different parties involved, including debt financiers. Thus, unlike RPICAO-type financing structures, in Project Finance structures the financiers are exposed to a certain level of project risk, which aligns interests and makes the debt financiers act as a disciplining agent that protects the project's interests.

3.29 In effect, the exposure to risk will be reflected in the cost of financing, as this cost is constructed based on two key factors: the probability of default and the value of the loss in such an event. A Project Finance type financing will probably have a higher cost in terms of interest rate than a RPICAO type financing since the former is exposed to some level of project risk while the latter is mainly exposed to sovereign risk.

3.30 However, the cost of capital should not be analyzed in isolation but in conjunction with the value for money of the project and the price for transferring risk. In other words, in the event of risk materialization, if the risk is effectively transferred to the private sector, the cash value

of the project should not be affected, or at least the impact is mitigated. On the other hand, if the risk is retained by the public, a risk materialization event will directly affect the cash value of the project. Therefore, the analysis of the cost of financing with pure Project Finance structures must be done in conjunction with a risk valuation analysis that adjusts the value for money in the event of a risk materialization event.

Requirements

3.31 Traditional project finance structures, i.e. without direct recourse to the State, require a careful structure that allows financiers to protect the source of debt repayment from project risks, requiring limited or no guarantees from sponsors.

3.32 In order to guarantee the bankability of projects under this mechanism, there are key points to be considered from the project structuring stage onwards:

1. **Equity at risk:** Financiers expect long-term equity at risk from the investor, so financial structures should seek to ensure that the project naturally incentivizes it.
2. **Time certainty:** As a condition to commit and provide resources, financiers require certainty on the disbursement and repayment schedule. For this, the issues of

land release, approval of studies and obtaining licenses are critical factors.

3. **3. Payment instruments:** The payment instrument that will repay the debt should have a high level of security under any extreme sensitivity scenario. For example, they should not be subject to the Grantor's discretion, the penalties affecting them should be reasonable, and the source of payment should have an acceptable risk profile.
4. **4. Risks:** The allocation of risks must be clear and precise in the contract, otherwise modifications will be required to make the project bankable. But, above all, it must follow the basic principle of assigning risks to those who are actually capable of managing and mitigating them. While this may be a general approach, it should be analyzed on a project-by-project basis.
5. **Lender protection in project documentation and contracts:** The non-recourse nature of Project Finance requires that the contractual basis of a PPP project recognize the role of financiers as third parties to a transaction, rather than a direct government counterparty. This is a subtle but very important principle, as it recognizes that damages caused by the

poor performance or default of the private sector partner (i.e. the SPV) fall disproportionately on the financiers, who in turn have only limited recourse from their borrower.

Thus, over the past 25-30 years, PPP contracts have evolved to include key protections for project finance lenders, including early termination indemnity, delay indemnity, change of law and force majeure and, most importantly, "step-in rights," which give lenders the right to intervene in the SPV to remedy the risk of default.

6. **Compliance with international social and environmental standards:** see next section.

3.33 This undoubtedly makes the set of project documents more complex, but it is the reason why many jurisdictions are working on developing a standard form contract in close coordination with lenders so that there is a set of lender protections in the contract that is acceptable to funders (particularly international lenders).

Credit quality enhancements

3.34 Credit enhancement instruments are instruments that help provide liquidity to the market, reduce capital costs, and increase loan maturities. It is important to note that they do not reflect a weak position on the part of the

country in terms of credit quality or political risk. On the contrary, they should be perceived as a strategic tool to stimulate the market, which is used even in developed countries such as the United States, the United Kingdom and Europe.

3.35 The quality of the source of payment will determine the cost of capital for financing; the lower the cost of capital, the less resources the project will require and the less access it will have to the financial markets. For this purpose, there are different mechanisms such as:

- **Use of multilateral development bank (MDB) loan proceeds for the VFG (viability funding gap):** Multilateral loan proceeds can be used to reduce the financing needs of the private sector portion of a PPP. This can be done as a direct grant or as a co-financier (or subordinate lender). This is a way of combining the lower cost of MDB financing, but using it in a way that mobilizes private investment; in this sense, maximizing the value of the often small loan endowments available to middle-income countries such as Peru, while reducing the government's balance sheet exposure (versus public financing). The presence of an MDB in the project financing structure also adds to the credibility and perceived soundness of

the structure among private investors. However, compliance with the highest international standards on environmental and social issues is essential for accessing these (see next section).

- **- Use of MDB loan proceeds for ongoing payment obligations:** Multilateral loan proceeds can be used on a performance basis to support projects with ongoing payment obligations (e.g., availability payment projects). In this situation, the MDB loan is only used when key performance targets are met and can therefore partially or fully fund the availability payment due. The deployment of committed multilateral funding in the operational phase could have a significant effect on reducing any perceived payment risk, which in turn could increase funder appetite and reduce the cost of capital/term length. The limitation of this approach is that the drawdown (utilization) period of a multilateral loan is usually restricted to around 5 years, so it can normally only finance obligations in the early years of operations. Therefore, this option may be suitable for smaller projects with shorter construction periods and, in particular, where

the authority may be sub-national and has higher counterparty payment risks.

- **Risk derivation products:** Multilateral agencies have a number of projects guarantees available that can reduce project risk to attract private investment at a lower cost of capital. These are often offered to back large payment obligations (e.g., power purchase agreements, termination obligations) in order to reduce perceived payment risks for lenders and investors. Guarantees typically provide partial coverage of the risk of non-payment or default on an obligation. The guarantee can be called upon in the event of default by the government and is typically paid unconditionally through the execution of a standby letter of credit provided in favor of the lenders.

MDBs usually require a counter-guarantee from the government to avoid the moral hazard of triggering a default, but this counter-guarantee, being contingent in nature, is usually accounted for at a fraction of a typical MDB loan, so the instrument can be considered more efficient from an accounting point of view than a traditional MDB loan.

Guarantees of this type have a significant "credit substitution" effect by using the

MDB's AAA credit rating to back a portion of a payment obligation which, in turn, allows financiers to perceive a lower credit risk and therefore offer a lower funding cost and/or longer term.

- **Contingent liquidity facility:** These instruments allow bridging the gap between on the one hand the short-term lending capacity of banks who have an appetite for construction risk, and on the other hand the long-term financier profile of institutional investors who are constrained by taking on construction risk. This facility is aimed at commercial banks that are limited to construction or mini-perm loans and do not have the capacity to provide long-term loans that align with project timelines. The product provides an option or guarantee to bank lenders to refinance the loan after a specified period, effectively reducing future refinancing risk. Whoever grants the facility (may be the government or an MDB) would commit to refinance the principal, on the same terms, provided certain conditions are met: (1) the commercial bank loan is not in default and (2) the risk coverage covenants are being met.

Case Study: In 2009 the Government of Flanders in Belgium launched a liquidity guarantee to meet the challenges of the 2008 crisis. This guarantee effectively pledged to repay senior debt by replacing the loan until such time as commercial financing could be provided once the market stabilized.

In order to encourage the facility to be executed only in times of market illiquidity, where there are no institutional investors capable of refinancing the bank debt, certain incentives are established, such as limiting or restricting the distribution of dividends and/or cash sweeps where cash balances must be mandatorily used for capital amortization.

This facility can be offered in either local currency or US dollars (or other hard currency) depending on the needs of the project. However, in local currency it would serve as a stimulus for the development of the local market.

Alternative sources of financing

Incentivize the local financial market: institutional and banking

3.36 One of the main motivations for using the RPICAO instrument is to achieve bankability of projects through access to international and institutional markets, given the limited depth of the local market. Interviews with investors indicate that the main challenges in Peru for implementing pure Project Finance structures are: the limited depth of the local market both in Peruvian soles and in US dollars, the strong requirements of bank guarantees to equity investors, the short term of the loans (on average 7 years and with effort 10 years) and high interest and commission costs.

3.37 These restrictions encourage even projects of less than USD 200 million investment to be financed in cases in the international capital market, incurring high transaction costs that are normally justified for transactions of at least USD 500 million.

3.38 Therefore, there is a clear need to stimulate the Peruvian financial market, both from the commercial and institutional side, which will allow access to financing in local currency at

terms more in line with the timing of a project and at more competitive costs.

3.39 Traditionally, in developing countries, commercial financiers (such as banks) have term restrictions, although they have an appetite for construction risk, provided that incentives are clearly aligned through balanced risk allocation structures. Therefore, a major concern for such financiers is future financing risk, given that, by their long-term nature, projects are not normally able to repay the full amount of debt in the first 7 to 10 years of the project.

3.40 It therefore becomes necessary to access long-term financing sources to complement short-term financing sources. A long-term financier by nature is the institutional investor (e.g., pension funds and insurance companies), who are interested in a long-term, stable source of payment, with significant ticket sizes, to balance their future obligations and diversify their portfolios.

3.41 In international markets, institutional investors have become increasingly educated in the analysis of investments in the infrastructure sector, developing the concept of "infrastructure as an asset class" as an investment strategy, to the point that several institutional entities have

teams and portfolios dedicated to investment in this area.

3.42 This has allowed projects to gain access to longer-term financing sources that are more in line with the terms of their contracts and in many cases has reduced the cost of financing due to the effect of a greater supply of resources in the market.

3.43 In addition, access to this type of investors allows for the expansion of financing sources in local currency, reducing the need to use payment instruments in USD where the State must pay or hedge the exchange rate risk.

3.44 However, reaching this point has required a process of interaction and education between project developers, governments, and institutional investors, but above all regulatory frameworks and contractual conditions that guarantee the security and stability of the projects' sources of revenue.

3.45 Therefore, the points recommended for the maturation of the PPP framework, especially in relation to risk allocation and certainty in the timing of land release and obtaining land and permits, become fundamental factors for accessing these sources of financing.

3.46 Additionally, in order to create a framework for interaction between short/medium term commercial financiers and long term institutional financiers, it is important to close the gap with instruments that mitigate refinancing risk in the face of market illiquidity events, which can be achieved through a Contingent Liquidity Facility, as explained in the previous section.

Green Bonds & Loans

3.47 Today, the international and multilateral financial market is highly interested in mitigating climate change through the projects in which it invests. There are several ways in which the financing of green projects can be carried out, among them green bonds and green loans.

3.48 Green bond issuance has been on an upward trend in recent years and continues to rise. As of December 2020, the global number of green bonds issued reached approximately USD 219 billion. Likewise, the number of bonds issued in January and February 2021 have seen a 29% growth compared to this same period the previous year.

3.49 This trend has also been seen in Latin America.

Emisiones de bonos verdes en Latinoamérica
A 2019, cifras USD, Climate Bonds Initiative (CBI)



Emisiones sostenibles en Colombia
2017 a la fecha, COP billones, no incluye emisiones privadas



Fuente: ICMA, CBI, BVC, cálculos Casa de Bolsa

3.50 Although Peru has not advanced much in this sector (especially in relation to the offer in Chile, Mexico or Colombia), it should be noted that in 2017 the Peru Green Bond guide was presented, as an initiative of the United Kingdom together with the Lima Stock Exchange.

3.51 Green Bonds and Green Loans must follow the Green Bond Principles (and Green Loan Principles respectively).

3.52 According to the principles, the financing must be applied exclusively to "eligible" green projects. The issuer (or project owner) of the bonds determines which criteria will be applied to determine the eligibility of these projects, but they must be projects that generally make a clear and positive contribution to five environmental objectives (climate change mitigation, climate change adaptation, natural resource conservation, biodiversity conservation, and pollution prevention and control).

3.53 When the project also has clear social benefits, a Sustainable Bond can be issued (which is guided by the Sustainable Bond Principles).

3.54 In order to issue Bonds or apply for the Loan, the issuer must have a Bond Management Framework. These Management Frameworks must describe the characteristics of the Bond or Loan and how it will be managed for the information of investors and underwriters, and to facilitate investment decisions.

3.55 The Management Frameworks are structured in 4 parts:

- The Use of Funds: this section establishes the criteria to be applied to select green projects (e.g. renewable energy projects with X generating capacity, sustainable transport

projects resulting in XtCO₂ emissions savings, climate change adaptation projects, etc.).

Criteria must be specific and objective.

- Project Evaluation and Selection Process: the issuer must implement a clear and transparent process to select projects that meet the established criteria.
- Fund Management: transparent management of funds, especially those not yet allocated or where the project in question is no longer eligible.
- Reporting: two reports must be published, one showing how the funds are allocated to the different projects and another impact report detailing the positive impacts that the projects are having.

3.56 Management Frameworks must be subject to an Independent Second Opinion by an entity that verifies that the Framework is in accordance with the principles, that the issuer applies the sustainability principles and that the criteria used effectively refer to green projects.

3.57 Management Frameworks and Second Opinions should be ready before issuance.

4 Analysis of environmental and social issues in PPPs in Peru & Benchmarking with international best practices

Introduction

4.1 Based on the high-level review of Proinversión's 2010-2020 portfolio and the Deep Dive study, the following analysis and benchmarking of Peru's performance on ESG issues as part of the PPP process has been conducted in relation to international best practice.

Feasibility Stage		
International best practices	Gap analysis in Peru	Recommendations
<p>Feasibility studies should include a preliminary review of environmental and social impacts and attempt to incorporate (at a high level) costs to mitigate environmental and social aspects.</p> <p>This is specifically relevant for those impacts that may have a high mitigation cost (e.g., costs for resettlement of a large segment of the population, ecological mitigation, and climate change compensation and mitigation measures).</p> <p>The feasibility study should seek to determine that the project remains viable once environmental and social mitigation costs are included. In particular, any land acquisition issues should be identified at this stage, as these issues can take years to resolve (particularly if this process is judicially reviewed).</p>	<p>There is no detailed information on the work done by the Ministries during the prefeasibility and feasibility stages, and whether these include environmental and social (E&S) considerations. It is understood that, prior to the project, some preliminary E&S studies were carried out to support project categorization (see below). It is unclear whether these studies were incorporated into project feasibility considerations. However, interviews indicated that these tended to be of low quality, making it difficult to obtain an accurate understanding of E&S issues in a way that could be meaningfully incorporated into feasibility studies.</p> <p>With the introduction of Advance Classification under Peru's National Environmental Impact Assessment System (SEIA), preliminary environmental studies are no longer required or performed, and preliminary social studies (if any) are of a very high standard.</p> <p>Normally the preliminary environmental impact study is done by the grantor, after the signing of the concession the concessionaire/private party has to adapt it for their specific and detailed project and submit it for approval - with a process as explained in these sections. Although depending on the complexity of the project there are cases in which the grantor is in charge of processing this study and its licenses.</p>	<ul style="list-style-type: none"> Regardless of project categorization, high-level preliminary E&S studies should be carried out to inform the technical and financial feasibility of the project. At this stage, these assessments may be primarily desk-based, but should be comprehensive and of sufficient quality to allow identification of any major E&S issues associated with the project. A review of the overall approach to feasibility studies may be necessary to ensure that all Ministries consider the outcome of the above studies in the project feasibility.
<p>In the prefeasibility and feasibility phase, project categorization is carried out based on the significance of any environmental and social impacts that the project may cause.</p> <p>Where a project is likely to require Project Finance (private, development banks, etc.), it is considered best practice to follow the recently revised Equator Principles (July 2020). Projects are categorized from A to C (category A being projects that have the potential to</p>	<p>Based on the information provided to Steer, it would appear that, in the past, projects were subjectively evaluated under the categorization system on the basis of inadequately formulated preliminary environmental studies.</p> <p>For this reason, in recent years, Peru has moved towards a system of Advance Classification of certain projects for the various levels of EIA through regulation. Under this system, by regulation, projects meeting certain characteristics are assumed to fall into a designated EIA category (Detailed Environmental Impact Assessment, Semi-Detailed Environmental Impact Assessment and Environmental Impact Statement). These Advance Classification regulations also establish the</p>	<ul style="list-style-type: none"> Include some flexibility in the ESIA Terms of Reference, approved by regulation, to allow for adaptation and consideration of issues that may be specific to a given project.

<p>cause significant environmental and/or social impacts and category C having minimal or no impact). This categorization follows the categorization process of the IFC and other development banks.</p> <p>Generally speaking, any large new infrastructure project or significant expansion of existing infrastructure assets would be classified as category A projects.</p>	<p>Terms of Reference to which the studies must be carried out. The following sectors have pre-classification regulations:</p> <ul style="list-style-type: none"> • Agriculture • Housing construction and drainage • Mining • Hydrocarbons • Industrial and commercial activities • Transportation • Electricity • Fishing and aquaculture • Solid waste. <p>Regulations for the communications, tourism, health, and defense sectors are in the process of being drafted.</p> <p>The Advance Classification system, when suitably and clearly defined, provides an objective mechanism for requiring EIAs (at the appropriate level). This is more likely to prevent projects from proceeding without categorization. However, it is perceived that approving Terms of Reference in advance may result in a rigid system that cannot be tailored to the specific needs of a given project.</p>	
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Prior to PPP Tender Launching		
International best practices	Gap analysis in Peru	Recommendations
<p>Once the project has been assessed as technically and financially feasible and categorized, prior to the launch of the PPP tender, an Environmental and Social Impact Assessment (ESIA) (or E&S assessment if a full ESIA is not required) is carried out in order to provide potential bidders and lenders with the necessary information regarding environmental and social impacts</p>	<p>In Peru, once the project is selected for a PPP, Proinversión is contacted to provide support in structuring the transaction and bidding. A Project Director is appointed within Proinversión, who liaises with the Social and Environmental Working Group (SASA) regarding the</p>	<ul style="list-style-type: none"> • A mechanism will need to be established in the future for a preliminary ESIA or E&S assessment (as appropriate based on project type) that can provide SASA with a holistic view of the key environmental and social issues to be considered during the assessment and

and to enable and inform the bid. This is in line with the IFC's Performance Standards (PS)1.

The ESIA must be adequate in scope, with all environmental and social aspects identified and their potential impacts.

Therefore, a scoping assessment is carried out to determine the range of aspects to be addressed, identify any information gaps, and propose the best methodology for any required survey. All potential issues need to be considered, as required by the IFC, including climate change, impact on indigenous communities and resettlement.

Following the scoping assessment, baseline studies need to be conducted. Baseline studies may include a combination of documentation and data review and field work to gather all necessary information on current conditions.

Based on the information provided by the baseline studies, a detailed prediction and impact assessment is carried out to determine the nature, temporal and spatial scale, reversibility, magnitude, likelihood, extent, and effect of such impacts. This detailed impact analysis requires professional judgment, and will require input from relevant experts, including ecologists, biologists, sociologists, and economists.

The ESIA or E&S should identify the mitigation needed for any negative impacts identified. Mitigation measures should be adequate, clearly defined in sufficient detail to allow for implementation, and measurable.

For certain (more sensitive) projects, it is considered good practice to develop an Environmental and Social Action Plan (ESAP) and an Environmental and Social Management System (ESMS) at this stage. At this stage of the project these documents would be high level but would provide an indication of the type of environmental and social actions that are likely to be required to manage impacts and implement mitigation. The ESAP and ESMS should cover the entire life cycle of the project (not just the

given project. SASA in turn appoints a social and environmental expert who will be assigned to that project.

Until recently, SASA was provided with any preliminary studies that had been prepared. Generally, SASA comments on the information submitted, validates it, and requires additional studies if the information provided is inadequate. Since the introduction of pre-sorting, SASA is obligated to independently gather as much information as possible. However, this may prolong SASA's assessment, which is obliged to wait for the requested information to be submitted. The information validation process is required if supplemented by field visits.

Once this is done, a diagnosis is issued and an Environmental and Social Plan is prepared by SASA, a report is submitted to the Project Director.

EIA and social studies are currently separate and are carried out by the Concessionaire after the award of the PPP process (see post contract award section for further comments on the current EIA system). Therefore, the SEAP compiled by SASA is not based on a full assessment and its quality would largely depend on the level and quality of information they have been able to collect.

structuring of transactions. This should be applicable to all infrastructure sectors and follow the IFC and Equator Principles and be of sufficient quality to enable robust identification of impacts, as well as defined, effective, and measurable mitigation. It is recommended that this be done as an integrated environmental and social process rather than separate studies as currently undertaken (see post contract award section for further recommendations on the ESIA process).

- SASA should ensure that the ESIA scoping and terms of reference conform to the requirements of international funding (IFC, IDB, WB, etc. and other IFIs), and not just the minimums established by local regulation. This will allow and facilitate the raising of international financing.
- SASA should also be involved in the approval of the ESIA, with powers to request additional surveys and evaluations when the quality of the report submitted is not considered to be in line with international best practices.
- SASA should continue to assemble a SEAP (and where necessary an ESMS).
- This mechanism should also be applicable to unsolicited proposals, where either the public or private party develops a study that allows for the assessment of E&S impacts.

<p>construction phase). As for the selection of the concessionaire, these should be tailored to the proposals and resources available to the concessionaire.</p>		
<p>At this stage of the project, the grantor should begin to examine any land acquisition and resettlement requirements. A full study should be commissioned and, if necessary, initiate any expropriation.</p>	<p>There is currently no clear information available regarding when land acquisition issues begin to be processed or considered. However, several of the projects reviewed by Steer did incur delays in implementation as a result of slow or problematic land acquisition processes.</p>	<ul style="list-style-type: none"> It is recommended that a mechanism be established to identify the need for land and to process any expropriation. This should include a timeline in which different milestones for this process should be reached and should consider possible legal processes and delays in such a way as to minimize the impact on the project.

PPP Tender		
International best practices	Gap analysis in Peru	Recommendations
<p>Bidders should have access to available information (including the ESIA or ESIA) and be able to make site visits as necessary.</p> <p>In order to successfully guide the process from an environmental and social point of view (e.g. answering bidders' questions, etc.), the Grantor must be supported by appropriate experts.</p> <p>At the time of submission, bids must be evaluated by an environmental and social expert, who will then provide input and liaise with the Grantor's project team.</p>	<p>It is generally understood that, as part of the bidding process, bidders are not required to present an approach to mitigating environmental and social issues as part of their technical proposals. It is currently unclear how the environmental and social credentials of participants in the process are evaluated or the weighting of such credentials, or any other environmental and social criteria, in the selection process.</p> <p>Concession winners are required to submit and obtain approval of environmental impact studies in conjunction with engineering studies prior to financial closing and commencement of construction.</p>	<ul style="list-style-type: none"> SASA's involvement must be maintained during the PPP bidding process. SASA's environmental and social experts assigned to the transaction must answer all environmental and social questions during the process. SASA must evaluate and score the environmental and social performance of the bidders and this score must be transparently accounted for in accordance with the weighting mechanism set out in the terms of reference.
Contract Award and Financial Closing		

<p>Environmental and social requirements should be included in the PPP legal agreement. At a minimum, clauses should be included regarding:</p> <ul style="list-style-type: none"> - Concessionaire compliance with the detailed environmental and social proposals as presented in the bid. Where variation is required at any point in the project, this should be subject to an impact assessment and alternative mitigation proposals. Any alternative proposals will need to be agreed with the authority/concession holder. It should be clear that the ESIA must meet the scope and standard required in the Terms of Reference, regardless of what is approved by the relevant environmental authority in the country. <p>This is important, as in some countries the legal requirements around ESIA and the expectations of regulators are lower than those required by lenders and investors.</p> <ul style="list-style-type: none"> - Sharing of responsibilities for any environmental and social issues that may be pre-existing or arise during the course of the project. - Penalties in the event of non-compliance with any of the above. - The technical proposal, including environmental and social aspects, must be attached to the agreement. 	<p>SASA representatives confirmed that a process is underway to standardize the environmental and social clauses included in PPP agreements. These clauses refer mainly to:</p> <ul style="list-style-type: none"> • responsibilities, • the level of environmental impact assessment required (as determined by current legislation) • implementation of best practices (such as IFC performance standards, carbon footprint, climate change, and energy efficiency) • development of an Action Plan based on the various environmental and social obligations associated with the project; and • periodic reporting based on the Action Plan. <p>It is understood that the creation and inclusion of such clauses is incipient, and it is unclear at this stage whether they have already been used in any of the more recent PPP contracts.</p>	<ul style="list-style-type: none"> • It should be ensured that these clauses are fully developed as soon as possible and included in all PPP agreements. • Full consideration of compliance with the IFC Performance Standards should be included. • While it is accepted that the level of impact assessment to be submitted for approval by the regulator will need to follow the existing SEIA (Peruvian environmental impact assessment system) regime, the results of the preliminary ESIA undertaken will need to be taken into account and this will need to be a requirement of the clause. • Consideration should be given to the inclusion of minimum environmental and social mitigation requirements based on the preliminary ESIA, which would ideally be agreed by both SENACE and SASA. Early communication between the two agencies is recommended at this stage to ensure alignment between the PPP requirements and any subsequent certification.
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Ongoing monitoring and financing		
International best practices	Gap analysis in Peru	Recommendations
<p>Once project implementation has begun, there must be continuous monitoring of compliance with environmental and social requirements. Normally, this monitoring is carried out by the concessionaire, submitting</p>	<p>Once Environmental Certification has been obtained, the responsibility of supervising the compliance of projects with its provisions falls on the OEFA (as the public agency supervising environmental permits). According to the OEFA</p>	<ul style="list-style-type: none"> • Proinversión (and more specifically SASA) should maintain a coordinating role during the project supervision phase. This should involve oversight,

<p>the corresponding reports to the Grantor (and, if applicable, to the relevant environmental or approval authorities).</p> <p>In accordance with international best practice, monitoring is carried out more frequently and in greater detail during construction (e.g., monthly tends to be the norm, although for certain projects quarterly may also be acceptable).</p> <p>Monitoring should also continue during the operation phase and throughout the life of the Concession Contract. This monitoring should verify that the operational activities do not cause negative environmental and social impacts and be in line with the measures foreseen in the ESMS.</p> <p>The monitoring reports should be reviewed by a competent person within the Grantor, who should liaise with any authorizing authority in order to avoid duplication of effort.</p>	<p>report "The linkage and feedback between certification and environmental oversight" (2016), coordination and communication between SENACE and OEFA is poor. It is unclear whether OEFA also oversees the implementation of the Environmental Adequacy and Management Program (PAMA). The PAMA is a complementary system to the SEIA and identifies and mitigates/manages the environmental impacts of an operating project.</p> <p>It is currently unclear how the implementation of social measures (including resettlement plans and/or livelihood restoration plans) is monitored.</p> <p>Proinversión has little interaction with the OEFA. It is noted that the OEFA does not monitor compliance with any of the best practices outlined in the contract. This is carried out by the Contract Administrator (part of the Ministries) and the interaction in communicating the different environmental and social obligations included within the final PPP Agreement and any Action Plans established under this PPP Agreement is not clear.</p>	<p>coordination, and engagement with OEFA and other social oversight agencies to ensure compliance with the terms of the PPP Agreement.</p> <ul style="list-style-type: none"> • Where the PPP Agreement includes environmental and social requirements beyond those authorized by the Environmental or Integrated Certification, SASA should be responsible for overseeing these aspects.
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A RPI Emission in USD

Ticker	Compañía Emisora	Fitch Rating	Valor de la emisión (USD Millones)	Fecha fin	Fecha de emisión	Term (años)	Duración (años)	Duración (días)	Duración Ajustada (días)	Cupón	TRS fecha de emisión	Spread en Fecha de Emisión
Lima Metro, 4.35% 5apr2036	Lima Metro Line 2 20:	BBB	563	05-Apr-36	18-Jul-19	17	7.98	2,874	2,880	4.4%	2.6%	1.76%
Line One Peru Metro Expansion, Lima Metro Line 1 2019	Lima Metro Line 1 2019		156	10-Jan-33	08-Mar-19	14	6.27	2,257	2,340	4.8%	3.2%	1.67%
Lima Metro, 5.875% 2034	Lima Metro Line 2 20:	BBB	1,155	05-Jul-34	10-Jun-15	19	10.29	3,704	3,780	5.9%	4.1%	1.81%
Interoceanica V Finance Limited Interoceanica V 2008	Interoceanica V 2008	BBB+	85	15-May-30	23-Sep-08	22	9.65	3,474	3,510	7.9%	6.5%	1.38%
IIRSA Norte Finance, 8.75% 30m: IIRSA Norte 2006	IIRSA Norte 2006	A-	213	30-May-24	03-Aug-06	18	9.20	3,312	3,330	8.8%	6.9%	1.81%
Red Dorsal, 5.88% 12 Oct 2031	Red Dorsal 20015		274	12-Oct-31	25-Mar-15	17	9.60	3,456	3,510	5.9%	3.5%	2.40%
Interoceanica V Finance Limited Interoceanica V 2008	Interoceanica V 2008		72	15-May-30	23-Sep-08			-	-	-	-	
Interoceanica IV Finance Ltd, 0% Interoceanica IV 2007	Interoceanica IV 2007	BBB	321	30-Nov-25	23-Apr-07			-	-	-	-	
Peru Enhanced Pass-Through Fir IIRSA Sur 2006	IIRSA Sur 2006	BBB+	455	02-Jun-25	14-Dec-06			-	-	-	-	
Longitudinal de la Sierra Highway Longitudinal II 2018	Longitudinal II 2018		333	27-Oct-33	27-Dec-18	15	9.50	3,468	3,510	6.0%	3.9%	2.06%

TRS: Sovereign Risk Rate

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