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Chapter 4.
Regional study on financing models for public-private partnerships in EBRD economies

I. Background

In the context of global, financial and economic instability, many countries struggle to finance large-scale projects. International practice illustrates that the use of public-private partnerships (PPPs) could be effective for raising much-needed funding and attracting private investment, managerial experience and know-how.

Under a typical PPP structure, the private party to the PPP is primarily responsible for mobilising finance by identifying investors and developing the finance structure for the project. In most instances, a specific project company is formed – called a special purpose vehicle (SPV) – which is financed through a combination of equity and debt. The project company's shareholders provide equity, and debt (most often) is provided by banks or through bonds or other financial instruments. Typically, bank lending comprises 70-80 per cent of the total financing while shareholders/sponsors contribute the remaining 20-30 per cent.

Looking beyond traditional bank lending, there is room to explore alternative ways to carry out PPP projects. Global awareness of sustainable PPP projects has increased among institutional investors, especially since governments have been trying to scale up investments to meet the United Nations Sustainable Development Goals (SDGs). Similarly, the introduction of innovative ways of financing and new forms of PPP structures could offer a broader range of PPP financing mechanisms.

PPPs encompass large infrastructure projects as well as relatively small but numerous projects (often at the municipal level) carried out in the interest of the public using private-sector financing. As PPP projects are long or medium term and may require significant financing, the choice of finance sources and financial mechanisms needs to be precisely adapted. There are interesting ways to finance projects (discussed below) that may be a better fit for their intended purpose and capable of replacing the conventional project finance structure when it appears that the project would not be "bankable" under a conventional financing structure, or to optimise such financing with the ultimate goal (from the public sector's point of view) to increase net economic (social) benefits and, in some cases, to protect taxpayers' investments in PPP projects.

The financing of PPP projects applies to both concession and non-concession (government-pay PPPs). These mainly differ as to the source of funding for remuneration of the private partner (user or government payment) but not on the up-front participation of private financing to construct and set up the project facilities.

Through this regional study, the legal consultant, at the request of the European Bank for Reconstruction and Development (EBRD), aims to help governments in EBRD economies gain a better understanding of potential financing alternatives for PPPs beyond traditional bank lending and to explore how to increase the financing available for PPPs via such alternatives and innovative mechanisms. It remains a study of existing and potential ways of alternative financing and in no way pretends to be exhaustive or a guide on any recommended mode of PPP financing, which will require further study – for each project individually – of traditional and alternative available sources of finance and PPP project structuring.

This study deals only with the initial, up-front financing of PPPs. Additional financing may be needed later in connection with heavy capital maintenance activities (for example, renewals of plant and equipment). This can raise special issues in the context of a fixed-term PPP arrangement, as there are fewer years over which capital recovery can take place. This study does not address these issues or the refinancing of SPV debt during the term of the PPP contract.

II. PPP finance structure

Different structures can be used for PPP financing depending on the level of recourse offered by the sponsors and shareholders of the project company: either non-recourse or limited recourse for project finance, or full recourse for corporate finance. The choice of financing method will depend in particular on the project size, the level of development of the local capital market, the bank's appetite for project finance in the country and the possibility to mix project and corporate financing to form an alternative PPP financing structure.

2.1 Project finance versus corporate finance

2.1.1 Project finance

Project finance refers to a specialised form of financing in which the lenders rely primarily on the cash flow generated by a specific project as the source of repayment, rather than the creditworthiness of the project sponsors. It involves the structured financing of large-scale, long-term projects, such as infrastructure developments, power plants, water treatment plants, mining operations, public buildings, hospitals, prisons or other facilities that traditionally used to be public assets. In project finance, the lenders assess the risks and viability of the project

itself, evaluating factors such as revenue generation, cost structure and potential cash flows to determine whether it can generate sufficient returns to repay the debt. This approach allows projects with substantial capital requirements and inherent risks to attract private financing while minimising the exposure of the sponsors or developers.

Project finance is one of the most popular arrangements for large infrastructure PPP projects. Initiated in the context of PPPs in the United Kingdom in the 1990s following its use in developing the North Sea oil fields in the 1970s and 1980s, it is now commonly used all over the world, including in developing countries. Not only banks can act as financiers in project finance; a wide range of investors can use this scheme, such as pension funds, investment companies, international financing institutions and even private or public entities contributing to the financing of PPP projects as equity partner, lender or guarantor.

In project finance, an SPV is created to hold the assets of the project. The SPV is owned by the infrastructure company and other equity investors, either passive investors, financiers or development finance institutions (DFIs)[1] or, as is most often the case, contractors, suppliers and service providers participating in the construction and/or operation of the future project. Lenders provide loans to the SPV. Their recourse in case of default is limited to the cash flows generated by the assets of the SPV, but not to the balance sheet of the equity investors. On the other hand, lenders will typically have security over the assets of the SPV.

The essence of this type of financing relates to the provision or the borrowing of money in favour of an SPV for implementation of the project. It usually involves the use of special bank accounts: escrow, nominee and security deposits. The main securities in this kind of financing are future assets to be created during the implementation of the PPP project (real estate, equipment, technologies, intellectual property and so on), the assignment of contracts and the project's cash flow (on which repayment of the debt will be based). Furthermore, this structure often requires the engagement of the independent creditor's agent who administers the security over the project. Risks in this scheme are usually allocated at the level of the SPV, but investors and other stakeholders can agree to bear a part of them. A set of contracts (including direct agreement, inter-creditor agreements and shareholder agreements) regulate the responsibilities and risks between project finance participants.

2.1.2 Corporate finance

Traditionally, before the development of project finance techniques in the infrastructure field, concessionaires financed PPP projects such as concessions on their own balance sheet, like any other company investment – a financing technique referred to as "corporate finance". Corporate finance involves proper budgeting, raising capital to meet company needs and objectives with debt or equity, and the efficient management of a company's current assets and liabilities. A company may borrow from commercial banks and other financial institutions or issue debt securities or bonds in the capital markets through investment banks. The full backup of an SPV by its shareholders providing a corporate guarantee to the lenders for repayment of all or part of the SPV's debt is also considered as corporate finance.

While helpful for raising finance for large, highly leveraged investments, project finance comes at a great cost. Development costs – including due diligence required by lenders and investors as a result of limited recourse and the absence of recourse other than the SPV asset, along with the creation of complex contractual and financial structures – substantially increase the transaction costs. In addition, interest rates for project finance debt are more expensive than government borrowing and often more costly than borrowing for established companies.[2] Lenders' requirement of large insurance coverage, including for delays in construction completion and for a broad range of force majeure events (including during operation), further boosts the cost of project finance and can make it unattractive or unaffordable for smaller deals. This is why many smaller PPP projects do not adopt non-recourse project finance structures; they wish to achieve greater contractual flexibility or lower the financing costs. Furthermore, commercial banks and DFIs do not even consider any project finance file below a certain threshold, which used to sit at around US$ 100 million but now tends to be closer to US$ 10 million to US$ 20 million, which in some cases requires the bundling of projects to reach this minimum figure. For very small local projects, the necessity to create an SPV is itself an obstacle.

[1] See Section 5.2 below.

[2] A deeper comparison of the cost of corporate finance and project finance would look at the weighted average cost of capital in both cases, not just the loan interest rate (less equity is used in a project finance structure). Moreover, the comparison would need to take into account the future increase in corporate loan interest rates as the company takes more debt on its balance sheet.

2.1.3 Mixed financing as an alternative form of PPP financing structure

Non-recourse or limited recourse project finance and full recourse corporate finance are not the only financing structures available. The PPP financing structure is actually quite diversified.

In some countries with less developed financial institutions and capital markets, where project finance is not common but contracting authorities wish to design good PPP arrangements, investors must create a PPP company (the SPV) which then obtains loans with guarantees from the SPV company shareholders as a sort of corporate financing.[3]

In countries with more developed financial markets, large investors finance PPP projects with their own resources (obtained through full recourse corporate finance) and later, after construction is completed and construction risk disappears (a risk with which long-term investors, especially pension funds, are not comfortable), they issue project bonds in the financial markets.[4]

Another alternative to non-recourse or limited recourse project finance and full recourse corporate finance is forfaiting and receivables financing. Under such schemes, a private party that is undertaking a project either sells its payment receivables to a bank, which is then paid by a public authority, or delegates all receivables under the project to a bank, which is then paid directly by the public contracting authority. As part of the deal, the public authority waives any objections to repay the lender in accordance with the payment schedule, despite any potential additional costs incurred due to deficiencies in the works constructed by the private party.

This type of financing structure for the construction of a facility transfers significant risk from the bank to the public authority and means the public authority can deduct payments to the private partner only from the (smaller) part of the service fee relating to operations. The part relating to construction is protected.

Receivables are usually part of the bank securities on the project proceeds for traditional PPP financing and not a PPP financing method per se. The delegation of availability payments (délégation de payment) or rents due by the contracting authority is, however, used for the financing of most if not all non-concession PPP agreements in France. It is the main security and the repayment mechanism against which financing is granted. However, the rationale of partnership contracts (marchés de partenariat) in France applying to non-concession PPPs is based on a performance approach, in which remuneration is "linked to performance targets assigned to the contractor for each phase of the contract".[5] In addition, the partnership contract "sets out the conditions under which risks are shared between the purchaser and the contractor".[6] The use of receivables and their delegation for the financing of a PPP project are likely to eliminate this sharing-of-risk objective as their financing is often based on unconditional acceptance of an assignment of receivables. Naturally, to keep the holder of the partnership contract at risk, it is always possible to adapt the system by limiting the proportion of receivables that can be assigned. This is precisely what the legislator in France did through the Dailly Law, which regulates the receivables attached to the partnership contract so that "the total commitment of the public entity in respect of such acceptance(s) may not exceed 80% of the remuneration due in respect of investment costs and financing costs".[7]

Nevertheless, financing PPPs by selling or delegating payments on account receivables would be more of an exception rather than the norm, at least as far as concession PPP projects are concerned. This is because they usually have complex contractual arrangements and financial structures that may not align well with the features of receivables financing. Additionally, receivables financing may not provide sufficient funds to cover the large capital requirements often associated with PPP projects. Still, it remains a type of financing through bank loans guaranteed by the project proceeds, but without supporting many of the project risks. Instead, it is based on the creditworthiness of the public authority and its unconditional undertaking to pay regular rents or availability payments due under the PPP contract, which is more fit for the financing of non-concession PPPs with limited performance-based payments than for concessions.

[3] A World Bank report on PPP financing in Latin America (WB 2017b) describes some of these financing arrangements.

[4] It should be noted, however, that construction risk can be transferred back-to-back to contractors.

[5] Article L2213-8 of the French Public Procurement Code.

[6] Article L2213-1 of the French Public Procurement Code.

[7] Article L313-29-2 of the French Monetary and Financial Code.

III. Classification and rating of PPP projects

As project finance techniques related to infrastructure projects matured following their experimentation in the early 1990s, it was observed that the qualification of infrastructure as a distinct new "asset class" as well as the rating of PPP projects by credit rating agencies could boost the financing for such projects.

3.1 Infrastructure as a separate asset class

The argument has been made that the amount of private financing going to infrastructure-related PPPs could be increased if pension funds, insurance companies, sovereign wealth funds, private equity funds and similar (together, "investors") considered infrastructure as a distinct asset class. They would then be likely to allocate more of their funds to infrastructure, and specifically more to infrastructure PPPs.

The term "asset class" is a fundamental concept in investing. It refers to a group of investments that have similar financial characteristics, behave comparably in the marketplace and are subject to the same kinds of laws and regulations. Essentially, an asset class is a broad category that encompasses a range of investments offering a certain risk and return profile. The categorisation provides a framework for investors to strategise their portfolio by diversifying across various asset classes, mitigating risk and aiming for returns aligned with their investment goals.

The conventional asset classes most investors use today are equities (shares in companies), bonds, cash or cash equivalents, and real estate. Few pension funds and insurance companies commonly treat infrastructure as a distinct asset class. While these institutional investors have increasingly incorporated infrastructure into their portfolios, it is typically seen as a subset of "alternative investments" or "real estate". The lack of standardisation, complex risk-return profiles and investment illiquidity are among the reasons for this. However, as data become more robust and the benefits of infrastructure investment become clearer, the trend to consider it a distinct asset class is gaining momentum.

As a separate class, infrastructure could provide a new avenue for capital allocation. Investors would set a target percentage of their portfolios to be allocated to infrastructure investment, and this would likely result in more funds being allocated to infrastructure than at present, where infrastructure investments are subsumed under other classes.

Certain risk-return characteristics could prompt analysts to view infrastructure investments as a separate asset class. Infrastructure investments are characterised by long-term, stable cash flows often regulated by governments or underpinned by long-term contracts, making them unique. Their returns are often independent of traditional market cycles, adding a degree of stability to portfolios. Moreover, infrastructure investments have relatively high barriers to entry due to the capital-intensive nature and complex regulatory environment, reducing competitive pressures. Such unique risk-return characteristics, differing markedly from traditional asset classes, bolster the argument for considering infrastructure as a separate asset class.

In addition, infrastructure investments can offer more inflation protection than investments in other classes. Contracts for these assets or rules set by utility regulators typically include inflation-linked pricing mechanisms, allowing returns to adjust with inflation. Hence, in an environment of rising inflation, infrastructure investments can add value to an investment portfolio.

In the past, some investors put infrastructure investments in the real estate asset class. While both real estate and infrastructure involve investments in tangible assets, they differ considerably. Infrastructure investments are often linked to essential services such as utilities, transportation and communication, which are less sensitive to economic cycles than real estate. Regulated or contractual revenues, often indexed to inflation, typically drive the return on infrastructure. In contrast, real estate returns are largely driven by property prices and rental income, which are more sensitive to market demand and supply dynamics.

Infrastructure investments generally exhibit low correlation with traditional asset classes such as equities and bonds. As this affects the overall volatility and risk-return profile of the investment portfolio, this low correlation often makes infrastructure an effective tool for diversification and risk management.

Some people argue that different infrastructure subsectors, such as utilities, transportation, energy and telecommunications, exhibit distinct risk-return profiles and market dynamics, suggesting they should not be lumped together. For instance, utilities often offer more predictable returns due to regulated rates, whereas transportation infrastructure may be more cyclical and influenced by economic conditions. Hence, treating all infrastructure as a homogenous asset class could oversimplify its complex nature and overlook these nuances.

There are also arguments against treating infrastructure as a separate asset class. Critics often point to the lack of standardisation, liquidity

constraints and high entry barriers as reasons against treating infrastructure as a separate asset class. Infrastructure projects are often unique, making performance comparison and benchmarking challenging. Additionally, simply looking at risk and return in a portfolio optimisation exercise may neglect other important factors. For example, infrastructure investments can be illiquid and challenging to exit, given the long-term nature of projects.

From a technical point of view, the discussion about whether infrastructure should be treated as a separate asset class continues, highlighting the complex and dynamic nature of investment classification. As investors' interest in infrastructure grows, catalysed by demand for new investment avenues and a shifting global focus on sustainable and social infrastructure, the question of whether infrastructure should be considered as a separate class (or classes) for the purpose of allocating funds may be influenced as much by broader social and political concerns as by narrow financial analysis.

3.2 Credit rating

Credit rating agencies often rate PPP bonds issued in international markets, generally by SPVs. These bonds usually target sophisticated institutional investors: asset managers, specialised infrastructure investment funds, insurance companies, pension funds and other large money managers.

These agencies – the main ones being Standard & Poor's, Moody's and Fitch (the Big Three) – provide bond issuers and investors with an independent analysis of a bond's creditworthiness, defined as the willingness and capacity to repay the debt. Given the very large investments in PPP bonds by pension funds and some insurance companies (in both advanced and emerging market countries), these investors welcome rating agency verification of the risks associated with a PPP bond, in addition to their own analyses.

Rating agencies have had to adapt their rating methodologies (originally designed for corporate finance) to PPPs' project finance capital structures. Their goal is that the specific rating given to a PPP bond (say, BBB) implies the same probability of default as would the same rating given to any other kind of bond, regardless of sector, bond structure and currency, and whether international or domestic.

The incentives for issuers and lenders to have a rated PPP bond is well entrenched in international markets and is becoming increasingly important in emerging market economies.

For pension funds and insurance companies, the credit rating of their investments – specifically by the Big Three – can be important as a downgrade in these ratings, especially if an investment falls below "investment-grade" status (below BBB-), can sometimes lead to a re-evaluation of the regulatory risk-based capital requirements of a company or pension fund. As a consequence of this re-evaluation, to ensure regulatory compliance, the company or pension fund may be required to allocate additional capital to cover potential risks.

Domestic PPP bonds have not been a consistent source of capital for PPPs in emerging markets, largely due to relatively immature bond markets that do not have sufficient demand for PPP bonds. But this is changing as wealthier middle- and high middle-income countries grow economically and seek to diversify their domestic sources of capital for PPP projects to include both domestic and international bank loans and bond investments.

Rating agencies have followed the growth of these bond markets, including PPP bonds. As the global financial markets become increasingly integrated, domestic PPP bonds are included in more rated PPP bond issues, and this has expanded the market for rating agencies.

Credit rating agencies, principally the Big Three, have successfully expanded both their international and domestic bond rating market footprint by creating or purchasing fledging rating companies in emerging markets. These began to appear in developing countries in the 1990s, and they mimicked the Big Three's business model to provide independent analysis of the creditworthiness of bond issues and issuers in their local capital markets.

International and domestic credit rating agencies have expanded the types of PPP bonds and structures that they rate and have continually upgraded their rating methodologies to keep pace with the growing complexity of PPP bond structures that have emerged in the global and domestic capital markets. Part of the increasing complexity has arisen from sovereign and sub-sovereign governments greater financial support for PPPs in ways that significantly change the debt risk profile. This requires more sophisticated rating methodologies and specialised expertise.

One aspect of the growing complexity involves large PPP project sponsors putting their operating cash flows from their PPPs into trusts that then issue asset-backed securities, an arrangement that enables SPVs to recycle their cash flow from their operating PPP assets to fund new PPP projects for their portfolio. Rating agencies play a key role in facilitating this process by upgrading their PPP methodologies to keep up with the rapidly evolving PPP structures.

IV. Instruments for financing PPP projects

Irrespective of the corporate or project finance structure used to finance a PPP, the main types of financing instruments for PPPs can be broadly broken down into different categories (described below): senior debt, subordinated debt, equity and investment grants. Each category contains subcategories. Mixed types of financing also exist (for example, subordinated debt can be combined with a right to purchase equity shares or benefit from profits). All such diversification and combination of the available instruments creates new financing opportunities.

4.1 Equity

Equity financing is the process of raising capital through the sale of company shares in return for cash. Equity financing comes from many sources. The primary source is the successful bidder (often a consortium), covering the mandatory portion of the financing required by the SPV's shareholders (usually 10-30 per cent) as stipulated by the tender rules or financiers. Other investors, including international finance institutions, may provide additional funding, as outlined in the proposed financing plan of the successful bidder.

This minimum compulsory equity financing by the sponsors can be provided through an initial public offering (IPO). An IPO is a process that private companies undergo to offer shares of their business to the public in a new stock issuance and raise capital from public investors in capital markets.

Many governments finance infrastructure projects via capital markets. While this arrangement could be more widely used to raise equity for PPPs in the future, some governments are hesitant due to the painful experience of the Channel Tunnel, which experimented with this technique.[8]

Providers of equity financing have no legal right to the return of or on the capital they invest. They will not invest unless they anticipate making at least a market rate of return, although they may eventually make less than that (and they can also make more than the market rate of return). Their return is risky (in both directions), which is why equity financing is more expensive than debt.

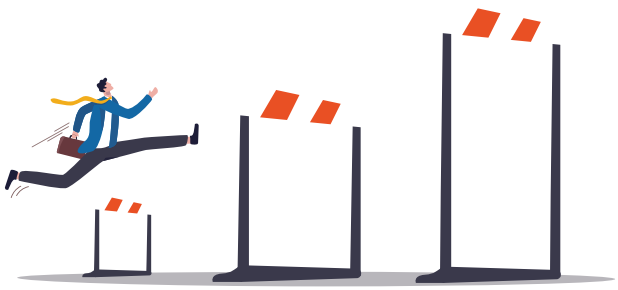
Some providers of equity care about achieving environmental, social and corporate governance goals as well as the financial return.

At first glance, the problem with equity financing appears to be that the cost – which depends on the return on investment or the internal rate of return expected by the market – is usually higher in PPP projects than the cost of debt, which implies higher tariffs or availability payments. Debt leverage provides efficiency to the financial structure (decreasing the weighted average cost of capital). Therefore, it increases affordability or decreases the payments that must be made by the authority (in government-pay PPPs) or users (in user-pay PPPs).

However, a closer look suggests that the underlying problem for the private partner is the project risks – especially the construction risk – and with respect to concessions, the commercial risk that falls on the SPV. In general, riskier projects require a higher return to compensate investors for taking on that risk, leading to a higher cost of capital. The risk profile of a project affects both the cost of debt and the cost of equity.

The more project risk that the SPV must bear, the more equity will be required by lenders to serve as a cushion against the risk. If ways can be found to reduce the risk affecting the SPV's cash flows, less equity will be needed and the weighted average cost of capital will be lower.

The public sector also has an interest in reducing project risk. However, if the SPV's risk is lowered by shifting risk to the public sector, then from the public sector's point of view, the extra costs – including contingent fiscal liabilities – related to that new risk must be taken into account.



[8] The private financing of the Channel Tunnel was provided though a loan by more than 220 banks, from equity raised via an IPO, with shares listed throughout the construction phase. This was the first time such a method had been used since the late 19th century. The evolution of the share price has been particularly erratic, reflecting the successive problems faced by the project since its inception, during construction (delays, extra cost) and operation (overestimation of traffic, underestimation of competition). During construction, the average share price remained sufficient but was highly volatile, illustrating in hindsight the mistake of turning to the stock markets for this type of project. After construction, it was apparent within the first decade of operation that the project was unprofitable, leading to a collapse in the share price until the 2007 restructuring.

4.2 Senior debt

Senior debt and creditor interest payments have first priority in the order of repayments of, and return on, capital provided to the SPV by all forms of financing. Because it is subject to the lowest risk, it is the least expensive way to finance a project (except, of course, for grants, which are by definition non-repayable). But because providers of senior debt require a very high probability of repayment, they will normally not agree to finance the project fully (and in some cases not even provide 100 per cent of the project's debt financing) unless almost all risk of loan default has been removed.

4.3 Subordinated debt or mezzanine financing

There are many subordinated debt or mezzanine financing instruments. Subordinated debt (often referred to as sub-debt) is debt that falls between senior debt and equity in terms of priority of repayment. It is debt that is subordinated to senior debt in its rights to cash flow and physical assets in a worst-case scenario. It can be structured in different ways; often it has some of the characteristics of equity. Subordinated debt typically has higher interest rates and more flexible terms than senior debt, but lower rates than pure equity financing. One advantage for shareholders is that obtaining mezzanine debt does not dilute the shareholders' ownership stakes, as would issuing more equity shares.

Shareholders of the SPV sometimes prefer to provide a large part of their financing in the form of shareholder sub-debt rather than equity. One advantage, compared with equity and dividends, is that interest payments made by the SPV to holders of subordinated debt will often be tax deductible.

Many other features of mezzanine financing can be appealing to investors. For example, it can reduce exit risk since there is a built-in exit through amortisation of the underlying principal – not true for equity.

The term "mezzanine financing" is often used. For some people, it is simply an alternative term to "subordinated debt", but it often implies that the instrument includes equity-type features that permit the investor to share gains realised by the SPV, such as by way of warrants, convertibility rights or profit participation rights. These mechanisms are sometimes referred to as "equity kickers".

Mezzanine finance is usually high-value unsecured (without pledge or other security) or with a deeply subordinated structure of security (for example, a pledge of specified low-priority assets without any recourse to the borrower's other assets). It often involves the purchase of shares of the SPV by an investor and the conclusion of a corporate agreement to ensure the protection of the investor's rights. Like senior debt, mezzanine finance is typically long tenor, usually more than five years. For external investors (that is, not core shareholders), the typical tenor is five to eight years.

When PPP developers face high capital expenditures, as is common in infrastructure projects, mezzanine financing can be a way for them to bridge the gap between equity and senior debt projects, providing enough capital to cover a developer's requirements when equity and senior debt cannot do so on their own. It also increases a project's debt-to-equity ratio, improving equity's rate of return to a level that equity investors are seeking. In so doing, mezzanine financing can also free up equity for other projects.

4.4 Project bonds

Project bonds offer an opportunity for institutional or private investors to participate in infrastructure projects through listed, tradable securities that can offer superior risk-adjusted returns.

Project bonds are debt instruments issued to finance infrastructure projects such as highways, bridges, airports and power plants. Unlike traditional corporate bonds, which are backed by the corporate issuer's creditworthiness, project bonds are backed by the future cash flows of the project they are financing. Project bonds are typically issued by the SPV.

Project bonds can be issued for 20 to 30 years, or even longer in some cases, to match the expected life of the infrastructure project they are financing. This is longer than the tenor of a typical project finance loan from a bank. This long tenor is attractive to investors such as pension funds and insurance companies that are looking for stable, predictable returns and long-term investments that match their long-term liabilities. Project bonds may also be attractive to investors because they offer higher yields than traditional bonds.

Possible disadvantages are that project bonds are generally used only for very large projects and they tend to be less flexible than bank loans. Unless the deal is very large, the transaction costs for project bonds are likely to be higher than bank loans. This is because project bonds often require a more complex and time-consuming process for issuance and involve a larger number of actors, such as underwriters, lawyers, rating agencies and trustees.

The qualification of infrastructure as a distinct new asset class, as well as the rating of PPP projects by credit rating agencies, could boost the financing of PPP projects through the issuance of project bonds.

This is explored in more detail in Chapter III, which is devoted to the classification and rating of PPP projects.

4.5 Capital-investment grants or subsidies

Capital-investment grants (or subsidies) are a form of non-repayable financing. This distinguishes them from both debt and equity. A wide range of multilateral, bilateral and other donor organisations – as well as regional institutions, such as the European Union – provide grants for infrastructure projects including PPPs. In addition, local sovereign and sub-sovereign governments may also consider non-reimbursable PPP grants. The PPP project costs, risk profile, the proposed financing structure and the grantor's funding policies determine the type of PPP and grant fund amount these donors may consider. Increasingly important for international donors is the project's compliance with the Sustainable Development Goals and environmental, social and corporate governance goals.

Grants and subsidies are usually combined with other financial instruments to create what is known as blended finance. Blended finance, which involves combining private and public financing/funding, is discussed in greater detail in Chapter VI.

V. Sources of PPP financing

5.1 Commercial and investment/merchant banks

Commercial banks play an important role in providing loans for PPPs. They may also participate in syndicated loans, where a group of banks pool their resources to provide financing for a project.

In some emerging markets and many developing countries, local commercial banks lack the financial capacity or the structuring capacity to provide the entire senior debt needed for a large PPP. Therefore, international banks and international financing institutions generally play an important role. Local banks may play a key role with respect to the mitigation of currency exchange rates, and in some cases can be assisted by loans in local currency provided to them by international financing institutions.

Investment banks can play various roles in financing PPPs, depending on the specific structure of the deal and the needs of the parties involved. In some cases, these banks may raise funds on the capital market to finance PPP projects directly. Alternatively, they may serve as intermediaries and help to structure the deal, although the actual financing may come from commercial banks or other investors. Investment banks may also help market the deal to potential investors and negotiate the financing terms.

The terms "investment bank" and "merchant bank" are often used interchangeably, but the two can differ. Traditionally, a merchant bank is a financial institution that primarily provides financing and advisory services, and it can invest its own capital in the deals it finances. Investment banks generally do not invest their own capital in the deals they finance.

Over time, however, the distinctions between the two types of banks have become blurred, and many financial institutions now offer a range of services that fall under both the investment and merchant banking umbrella.

5.2 Development finance institutions

Multinational, bilateral, regional and national development banks and agencies play a major role in providing financing for all types for PPPs in emerging markets and developing countries. Contracting authorities would be well advised to contact relevant DFIs at an early stage to explore how they might become involved in financing a prospective PPP, either working principally with the private partner (for instance, as lender to the SPV) or with the contracting authority (for instance, as guarantor or viability gap funding contributor in some way).

Multilateral development banks and donors have sometimes collaborated to set up specialised DFIs. An example is the Private Investment Development Group, a DFI that complements private investment financing sources for PPPs in sub-Saharan Africa and South and South East Asia. Bilateral and multilateral donors – six governments and the International Finance Corporation (IFC) – own the group, which selects financing mechanisms for projects based on its goals: "to combat poverty and deliver high development impact". One of the Private Investment Development Group's principal financing mechanisms is a "viability gap" grant to leverage other private debt and equity investment funding sources. It also provides debt and equity to mobilise additional financing – an excellent example of "blended finance".[9]

5.3 Project sponsors

The sponsors of the PPP are the entities that promote the project and set up the SPV. They are usually,

[9] See Chapter VI below.

directly or indirectly, the majority shareholders of the SPV and take the lead role in the project. As such, they conventionally provide most of the equity and often subordinated debt (quasi-equity).

From the public sector perspective, the provision of equity financing by the sponsor can be crucial to the success of the PPP. It generally provides a strong incentive for the sponsor to ensure that the project performs adequately as the return on equity depends on how well the project performs financially. The project sponsors, however, usually have a conflicting interest as shareholder on one side and as contractor, supplier or provider of services ensuring a short-term profitability on the other, and may consider dividends as a bonus rather than their main objective. This is precisely the reason for the efforts made in Australia to develop the "inverted bid model" or superannuation SP3 to deprive the sponsors cumulating the role of contractor and main shareholders of their privileged position in a traditional PPP contracting and tendering structure.[10]

5.4 Capital market and bond issuance

Sourcing financing from the capital market refers to the process of raising funds by issuing securities such as stocks or bonds to investors through a public offering or private placement. In the context of PPPs, the main focus is on bond issuance, not public offerings of equity shares. Many of the financing instruments described in Chapter IV can, in principle, be accessed from the capital market.

A corporate bond is a type of debt security issued by a firm and sold to investors. The company gets the capital it needs and, in return, the investor is paid a pre-established number of interest payments at either a fixed or variable interest rate. When the bond expires, or reaches maturity, the payments cease and the original investment is returned. Investors building balanced portfolios often add bonds to offset riskier investments such as growth stocks. Over a lifetime, these investors tend to add more bonds and fewer risky investments to safeguard their accumulated capital. The SPV that is implementing the infrastructure project would issue corporate bonds.

There is also a special type of bond – an infrastructure bond – that is issued by private companies or state-owned enterprises for the financing of infrastructure projects. Quite often, the government provides guarantees for the issued bonds, which makes them attractive to a larger number of market participants, as doing so reduces the risk. Due to the long payback period of infrastructure facilities, the bond circulation period is also quite long. Therefore, such bonds will mainly target institutional investors, including insurance companies and pension funds.

Project bonds offer an opportunity for institutional investors to participate in infrastructure projects through listed, tradable securities that can provide superior risk-adjusted returns.

To date, project bonds have been successfully used in Europe and the Americas to fund infrastructure projects. In Europe, corporate bond markets continue to grow despite the increase in market volatility, and it is anticipated that the use of corporate bonds to fund infrastructure projects in Europe will play a significant role in boosting the economy.

Other bond types, including impact bonds, are arrangements in which investors purchase bonds from the state to fund development projects. The government repays the investors if the projects have achieved certain outcomes or the state guarantees the obligations of the issuing authority, which raises private capital to fund infrastructure projects.

5.5 Impact investors

Impact investors provide financing (loans or equity) to reach certain social or environmental objectives. As such, impact investors (sometimes providing funds through social impact bonds or development impact bonds) are repaid only to the extent that pre-agreed outcomes have been achieved. Because they aim to meet social and environmental objectives, the transaction documents require detailed quantitative measures of success on these dimensions. The relevant outcomes are generally more fundamental than the more proximate outputs used for purposes of remuneration in conventional PPPs. For example, in a primary school project, an outcome could be the progress in the literacy level of the children. Thus, while impact investors expect to receive at least a return of their capital and generally some financial return on their investment, they may be satisfied with a return that is below the market rate as long as their desired objectives are met.

5.6 Mutual funds

Institutional investors such as investment funds, insurance companies, mutual funds or pension funds typically have large sums available for long-term investment and could represent an important source of funding for infrastructure projects either through private placement or via bond purchases.

[10] See Section 7.4 below.

A mutual fund is a type of financial vehicle made up of a pool of money collected from a large number of private investors to invest in securities including stocks, bonds, money market instruments and other assets. It is a set of properties attracted and managed by a company that could be used to implement a PPP project.

Shares of the mutual fund are generally bought and sold on the market. Sometimes, however, they can be bought back by the fund after a specific period required to implement the project.

The average mutual fund holds more than 100 different securities, which means mutual fund shareholders gain important diversification at a low price. At the same time, specialised mutual funds invest only in companies in one sphere of business, for example, in infrastructure or real estate. They generally do not invest directly in the target companies, the way a private equity fund does. Thus, the mutual fund solution builds on the capital market solutions that the SPV may adopt.

Mutual funds may buy shares, bonds or other assets of the companies in which they are investing, but most of the time they buy and sell publicly traded securities, sometimes participating in IPOs. In principle, then, mutual funds could be created for investing in PPP projects. Investors who buy shares of the mutual fund will get a share in the profit of the project. Each shareholder therefore participates proportionally in the gains or losses of the fund.

5.7 Private equity funds

A private equity fund is a type of investment fund that invests in privately held companies or buys out publicly traded companies, making them private. These funds typically raise capital from institutional and high net worth investors, pool the capital and then invest in companies with the aim of generating high returns for their investors.

A private equity fund is typically set up as a limited partnership. In this structure, the private equity fund entity acts as the general partner while the investors (known as limited partners) provide most of the capital for the fund. The general partner manages the day-to-day operations of the fund, makes investment decisions and is responsible for generating returns for the investors. The limited partners receive a share of the profits based on their initial investment.

Private equity funds typically have a fixed term, usually around 10 years, during which they actively invest in companies and then exit their investments through a sale or IPO to generate returns for their investors. The funds may invest in a range of industries and use a variety of investment strategies.

Investing in private equity funds can be attractive to investors seeking higher returns than traditional investments, such as stocks and bonds, as well as portfolio diversification. However, private equity investments are typically illiquid and require a longer investment horizon than other asset classes. Additionally, private equity investments can be riskier than publicly traded stocks due to the lack of public information and transparency about the underlying companies.

Some private equity funds focus on PPP investment, providing equity or mezzanine debt. Some also are established specifically to invest in infrastructure in emerging markets and developing countries, including PPPs, often with significant funding from DFIs. These would fall under strategic investment funds and infrastructure funds.

5.8 Strategic investment funds and infrastructure funds

Strategic investment funds (SIFs) are investment funds or corporations established by governments or DFIs, primarily to provide equity to projects with both policy and commercial objectives, in partnership with private capital.

Over the past 15 years, there has been a marked increase in the number of government-sponsored SIFs across countries at all national income levels. However, these funds struggle to achieve economic policy goals while also ensuring commercial financial returns – what is commonly known as the “double bottom line”. Thus, while well-structured and well-managed SIFs can attract private investors to prioritise PPP investments, thereby maximising the impact of public capital, their success depends on the fund’s ability to navigate the double bottom line, identify investment opportunities and secure the right fund management capacity.

Successful implementation of SIFs can create opportunities that attract private investment, strengthen domestic capital markets and enable governments to become professional long-term investors. This is partly due to the specialised expertise in the structuring and financing of investment projects, alongside the implicit political and regulatory risk insurance for private investors (particularly for infrastructure projects more exposed to sovereign risk), that SIFs provide as co-investors.

The structure of SIFs can vary across a spectrum from private management of public capital to fully state-owned direct investment funds, with hybrid funds in between. The choice of structure depends on the relative importance of market validation versus policy objectives. Private management of public capital

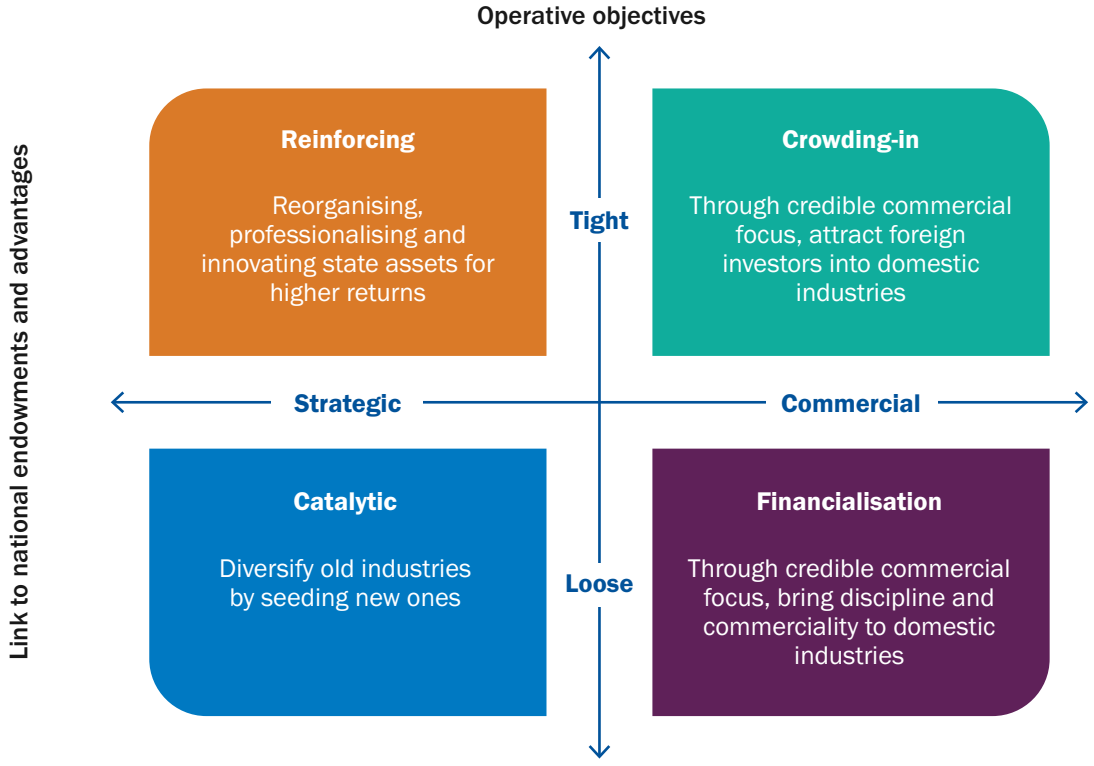
occurs when a government invests in a private fund that reflects policy priorities, or when a public entity shares risk as a limited partner in a hybrid fund. The private-sector general partner or an independent investment committee that may include government representatives independently make investment decisions, while the fund's board, usually controlled by limited partners, sets the investment policy. The fund manager and general partner may be required to invest a portion of the total capital. This was the approach taken for the Philippine Investment Alliance for Infrastructure Fund, for instance.

In fully government-owned or operated funds, market validation may come from constraints on the ownership share in each investment, limiting the SIF's investments to minority participation of a certain size. Except in the case of hybrid funds, a government-owned fund management entity that operates independently of the government usually manages the fund. Generally, the more private capital that participates in the fund's structure, the greater the market validation of the investments.

There is also a category of privately run infrastructure investment funds that specialise in financing, developing and managing long-term infrastructure projects across various sectors, such as transportation, energy and social infrastructure. These funds primarily invest in projects through PPPs and focus on delivering sustainable and long-term value to their investors and stakeholders. As private infrastructure funds focus on long-term investment horizons, they typically provide more stable cash flows than traditional private equity funds. Additionally, unlike SIFs, which are government-owned and pursue nationally strategic objectives, infrastructure investment funds are privately owned and primarily aim to generate returns for their investors while also creating a positive impact on society and the environment.

A good example is Meridiam, a global PPP fund manager formed in 2005 that has invested in more than 100 projects worldwide.[11] Meridiam focuses on PPP projects in transportation, social infrastructure and sustainable energy, and it generally invests in equity and mezzanine debt. DFIs such as the European Investment Bank, the IFC, the French Development Agency and the German Investment Corporation have participated in funds managed by Meridiam or co-invested alongside Meridiam in specific projects. These partnerships help to mobilise additional financing, share risk and provide expertise in structuring and implementing projects.

Another fund manager is the Macquarie Group, an Australian multinational financial services company that, through its Macquarie Infrastructure and Real Assets division, invests in PPPs in toll roads, utilities and renewable energy projects (among others) in emerging markets and developing countries.



Source: The World Bank, Strategic Investment Funds Opportunities and Challenges (2016).[12]

[11] Meridiam is incorporated in France as a société à mission.
[12] Strategic Investment Funds: Opportunities and Challenges (2016), Policy Research Working Paper No. 7851, written by Håvard Halland, Michel Noël Silvana Tordo, Jacob J. Kloper-Owens, published by the World Bank.

5.9 Sovereign wealth funds

A sovereign wealth fund is a state-owned investment fund that holds and invests a country's surplus wealth. These funds are typically created by countries with large foreign exchange reserves or substantial trade surpluses.

The main objective of a sovereign wealth fund is to maximise returns on the invested capital while preserving the long-term value of the fund. The fund may invest in various asset classes, such as stocks, bonds, real estate and alternative investments including private equity, hedge funds and infrastructure projects.

Sovereign wealth funds are generally funded by a country's budget surplus, the proceeds of privatisations or revenue from natural resource exports. They can be used to diversify a country's assets, stabilise its economy and provide a source of funding for social welfare programmes.

Examples of sovereign wealth funds include the Government Pension Fund of Norway, the Abu Dhabi Investment Authority, the Public Investment Fund in Saudi Arabia and the China Investment Corporation.

Sovereign wealth funds may invest in PPP projects directly or indirectly through partnerships with infrastructure funds or other institutional investors. Investing in PPP projects can provide sovereign wealth funds with a stable source of income, as these projects typically involve long-term contracts with government entities. Additionally, investing in PPP projects can help to support economic development and improve the quality of life for residents of the country – an objective that aligns with the broader goals of many sovereign wealth funds.

5.10 State-owned non-bank finance companies

A state-owned non-bank finance company is a financial institution owned by the government and operating outside the traditional banking system. They offer banking services, but do not hold a banking licence, and focus on providing loans, advances, leasing, hire purchase, insurance and investment products. These institutions are often created to provide financial services to specific sectors of the economy, such as agriculture, small and medium-sized enterprises, or housing.

State-owned non-bank finance companies raise low-cost debt on domestic and international markets, backed by their government's sovereign guarantees. They then offer that debt to PPP projects that would otherwise struggle to access long-tenor debt.

This is typically the role of the French model of Caisse des Dépôts et Consignation (CDC) (Deposits and Consignments Fund), a public financial institution running a special protection fund for deposits and life insurance and helping the state develop its infrastructure projects. Its primary initial purpose was to manage the various deposits entrusted to it before reimbursing them to the rightful claimants at the end of the process, but it now plays a leading role in many infrastructure development projects in France, such as for broadband development in remote areas.

Such CDC mechanisms exist in many French-speaking countries, such as Belgium, Morocco, Tunisia and Quebec in Canada, and some others including Mexico and the Philippines.

Morocco's Caisse de Dépôt et de Gestion, the equivalent to the CDC, is a state-owned financial institution that manages long-term savings in the country. Given its substantial assets, it also acts as a large investor in Morocco, especially in the tourism sector. It has many subsidiaries operating in various sectors of the economy.

Such institutions may also operate internationally. An example is Quebec's Caisse de dépôt et placement du Québec, which has reached an agreement with the Australian leader Plenary Group for the CDP to participate in five investments in PPP projects in Australia, including the Melbourne convention centre (AU$ 139.2 million, or about €84 million, total).

PT Sarana Multi Infrastruktur, a state-owned enterprise established in 2009 by the Indonesian government, offers financing for infrastructure projects, including PPPs, in sectors such as transportation, energy, water and telecommunications. It operates as a special purpose company, focusing on infrastructure financing and development, rather than as a traditional bank with a broad range of banking services. PT Sarana Multi Infrastruktur raises funds from government equity, debt issuance (including Islamic bonds or sukuk) and multilateral and bilateral institutions.

5.11 Export credit agencies

An export credit agency (ECA) is a government or quasi-governmental agency that provides financial support to companies in their country to facilitate and promote international trade. ECAs typically offer various forms of financing, guarantees, insurance and other forms of credit enhancement to domestic companies that export goods or services.

ECAs often play a role in financing PPPs, providing credit enhancement to private-sector participants in the PPP project by offering guarantees or insurance to lenders or equity investors. By providing this credit enhancement, ECAs make it easier and more

appealing for private sector investors to participate in PPP projects, which in turn helps attract more private sector investment.

ECAs also offer financing directly to PPP projects in certain cases. For example, they may give loans or other forms of financing to support the export of goods and services that are used in PPP projects.

5.12 Insurance companies

Insurance companies can be involved in PPPs as equity investors, lenders or providers of risk management services. PPPs across a range of sectors are potentially attractive as they offer long-term, stable and predictable returns on investment and are often backed by government guarantees. The transportation sector (roads and bridges) has been a particular focus, but healthcare (hospitals) and energy (for example, wind farms) have also been targeted. Insurance companies can invest in PPP projects directly, or indirectly through private equity funds or infrastructure funds.

Insurance companies can also offer risk management services to PPP projects, such as supplying insurance coverage for construction and operational risks. This helps to mitigate risks for other project participants in a much more extended way than for traditional public procurement projects, and possibly covers many risks that lenders do not want to assume and that the parties are not used to covering in non-PPP projects.

5.13 Pension funds

Public pension funds derive at least part of their resources from contributions made by employees, and their fiduciary responsibility is towards their contributors. Specifically, for a defined contribution scheme, the fiduciary obligation is to maximise the replacement value of pensions given to members when they retire and at the same time to secure long-term regular income at the lowest possible risk.

Some pension funds are interested in investing in PPPs because they can provide stable, long-term returns that match their long-term liabilities. Additionally, infrastructure is sometimes considered as a separate asset class (as previously mentioned),[13] so PPPs may offer a source of diversification for the pension fund's portfolio.

However, PPP projects require specialised expertise to analyse and monitor them properly, and they can be highly idiosyncratic. Due to the complexity, uncertainty and political risk associated with many PPPs in emerging markets, interest by pension funds has been limited. Regulatory requirements can also curb the interest of pension funds in PPPs: some countries restrict the types of assets in which pension funds are allowed to invest. When pension funds do invest, it is often only after the construction phase is completed, through a refinancing. This helps reduce risk.

Canadian and Australian pension funds have played a noteworthy role in investing in PPPs, primarily in Western and high-middle income developing countries. Some Canadian and Australian pension funds have allocated more than 10 per cent of their investment portfolios to infrastructure, treating it as a separate asset class.

In emerging markets, pension funds in Brazil, Colombia, India, Mexico and South Africa, among others, have invested (directly or indirectly) in PPPs. Investing in PPPs by pension funds is sometimes done indirectly through other investment funds – for example, through one of the funds managed by Meridiam.[14]

5.14 Investment platforms (crowdfunding)

Crowdfunding, a way to attract financing for small PPP projects or projects with high social significance, is growing in popularity. Crowdfunding is the use of small amounts of capital from a large number of individuals to finance a new investment project. It uses the easy accessibility of vast networks of people through social media and crowdfunding websites to bring investors and entrepreneurs together, with the potential to increase entrepreneurship by expanding the pool of investors beyond the traditional circle of owners, relatives and venture capitalists.

The investment platform is a special system on the internet that can be used by parties involved in implementing projects to conclude investment agreements with a large number of users of such platforms. The investor provides money for the chosen project and receives a digital right certificate that certifies his/her right to return on the investment, if and as appropriate.

In donation-based crowdfunding, contributors receive no financial reward in return for their financial support. In equity-based crowdfunding, investors receive financial returns on their investment to the degree that the venture is profitable, similar to conventional equity investors in a PPP. Finally, in debt-based crowdfunding (or crowdlending), supporters function as lenders and receive a previously defined interest rate and return of their loan within a certain period. Debt-based

[13] See Section 3.1.

[14] See Section 5.8, Strategic investment funds and infrastructure funds.

crowdfunding is the most popular form of crowdfunding in terms of global funding volume.

5.15 Philanthropic financing sources

Traditionally, governments or development finance institutions have provided the subsidised component of blended finance for PPPs. DFIs, such as the World Bank and regional development banks, typically use their resources, through a range of financial instruments, to de-risk investment opportunities and make them more attractive for private-sector involvement.

An evolving trend in blended finance is the active role of private, not-for-profit philanthropic entities in providing the subsidised component of the financing or in funding-related facilities and activities. These entities, including foundations, non-profit organisations and impact investors, have an interest in social and environmental outcomes. Their funding often comes with fewer bureaucratic hurdles and can be more flexible in terms of the sectors and regions it targets, making it an increasingly valuable part of the blended finance ecosystem. The term "public-private-philanthropy partnerships" has been growing in popularity.

Private philanthropic entities can provide subsidies in various forms. They may offer grants, which are often used to fund feasibility studies, capacity building and technical assistance. These grants can play a critical role in enabling PPPs to reach financial close and become operational, thereby attracting additional commercial finance. Philanthropic entities may also provide capital at below-market rates in the form of low-interest loans or equity investments (including first-loss equity participation), which can be used to leverage additional private sector investment. Philanthropic organisations have been repurposing traditional grant instruments into concessional investment instruments – for example, structuring grants as zero-interest loans.

Moreover, the role of these philanthropic entities extends beyond merely providing funds. They also play a crucial part in bridging the gap between public and private interests, offering valuable expertise and knowledge, and bringing innovative ideas and solutions to the table. They are often closer to the communities and understand the local context better than many government agencies and private corporations, which can lead to more effective and sustainable outcomes.

Some of the better-known philanthropic entities that have provided funds for PPPs include:

- The Aga Khan Foundation (head office, Switzerland): the Aga Khan Foundation, part of the Aga Khan Development Network, focuses on health, education, rural development and building civil society institutions in the poorest parts of South and Central Asia, Eastern and Western Africa, and the Middle East. It has been involved in various blended finance initiatives, leveraging private sector funds for the sustainable development of underserved communities.

- Shell Foundation (United Kingdom): Shell Foundation is a British-registered charity that uses a blend of grant capital, business support and market-enabling activities to co-create social enterprises in sectors including energy (for example, mini-grids) and sustainable mobility. It works extensively with public and private partners to drive inclusive market growth and poverty reduction.

- The IKEA Foundation (the Netherlands): the IKEA Foundation is committed to improving opportunities for children and their families in some of the world's poorest communities. The foundation funds programmes that support sustainable livelihoods and promote renewable energy, often using blended finance mechanisms to mobilise private sector engagement.

- The Bill and Melinda Gates Foundation (United States of America): as one of the largest private foundations in the world, the Bill and Melinda Gates Foundation has pioneered the use of innovative financing models to tackle global challenges, particularly in the fields of health and education.

- The Omidyar Network (United States of America): the Omidyar Network is a self-styled "philanthropic investment firm" composed of a charitable foundation and an impact investment firm. The Omidyar Network funds and supports initiatives that bring together public, private and non-profit sectors to solve complex socio-economic challenges in the areas of emerging technologies, education and digital financial services.

- The Rockefeller Foundation (United States of America): the Rockefeller Foundation, one of the oldest and most influential philanthropic organisations in the world, has a long history of leveraging its resources to catalyse private and public sector investment in key areas such as health, food, power and jobs. It has been a pioneer in using innovative financing tools such as first-loss capital.

VI. Blended finance

Blended finance can be used across a range of structures, geographies and sectors using a variety of instruments including project finance and PPP. Deals bring together different stakeholders that partner in a fund or transaction, with a mixture of development funding and private investors or funds for specific project preparation activities. This helps to offset high upfront costs and improve the financial viability of infrastructure projects. This makes investments in infrastructure projects in developing areas more attractive to long-term private investors and makes viable philanthropic projects with social benefit – both of which increase efficiencies for investors – and creates alternative ways of financing PPPs.

The non-private-sector financing in blended finance is either in the form of grants (or subsidies) or is provided at below-market (concessional) rates. The public sector financing in blended finance includes a subsidy component.

6.1 The definition and characteristics of blended finance

The definition adopted in this study is that of the DFI Working Group on Blended Concessional Finance for Private Sector Projects:[15] "Combining concessional finance from donors or third parties alongside DFIs' normal own-account finance and/or commercial finance from other investors, to develop private sector markets, address the Sustainable Development Goals (SDGs), and mobilize private resources."

The World Economic Forum and the Organisation for Economic Co-operation and Development (OECD) take a slightly different approach. They define blended finance as "the strategic use of development finance and philanthropic funds to mobilize private capital flows to emerging and frontier markets".[16] Blended finance deliberately channels private investment to sectors of high development or social impact while at the same time delivering satisfactory risk-adjusted returns.[17]

Blended finance has three key characteristics:

– **Leverage:** use of concessional development finance and philanthropic funds to attract private or public capital into deals.
– **Impact:** investments that drive social, environmental and economic progress.
– **Returns:** financial returns for private investors in line with market expectations, based on real and perceived risks.

Blended finance is an approach to structured finance that enables development and philanthropic funding to mobilise private capital into a project or company that promotes development outcomes, by mitigating risk and ensuring commercial risk-adjusted returns. Blended finance attempts to achieve similar goals to affect investing (intentional approach to create societal and financial impacts) by using a structuring approach to blend a range of investor motivations to achieve these development objectives at scale.

6.2 Examples of blended finance

Blended finance is widely used for many kinds of PPPs where private financing is closely associated with public financing or other sources of financing, either upfront or during the development or the operation of the project, namely through viability gap funding. Building on evidence from a survey done on behalf of the World Economic Forum, the OECD released recent findings that identified 180 blended finance funds and facilities, with US$ 60.2 billion in assets invested across 111 developing countries, affecting more than 177 million lives. These figures illustrate the tremendous potential of blended finance to close the funding gap required to finance the ambitious SDG agenda and deliver development outcomes.

In addition, blended finance can generate public support for private investors in sectors where societal support is lacking (for instance, mining or manufacturing) or where the activity is not profitable enough, but is required for the socio-economic benefits (for instance, broadband and hospitals). Blended finance projects can take different forms that may not be recognised as PPPs, for instance, the recent rollout of broadband. Rolling out broadband infrastructure, especially in rural and remote areas (excluding purely private projects for densely populated areas) tends to rely on grants and subsidies that ease financing constraints for governments in an effort to narrow the digital divide.

Broadband rollout is on the agenda of most countries, including emerging economies. It has become a political priority around the world following the Covid-19 pandemic. Various PPP contractual forms are used in international broadband rollouts, and PPP financing

[15] DFI Working Group, Joint Report, March 2023 update.
[16] According to the OECD's use of the term, blended finance does not necessarily require a subsidy component (see OECD DAC Blended Finance Principles for Unlocking Commercial Finance for the Sustainable Development Goals [2018].) The present study believes it is useful to include the subsidy aspect in the definition, as in the DFI Working Group definition. Otherwise, senior debt provided by, for example, the EBRD or the IFC would, by itself, be considered to make the financing structure blended financing. This is too broad a scope to be useful, given how many PPP deals in the EBRD regions receive senior debt from DFIs at non-concessional rates.
[17] The term "risk-adjusted return" takes into account the idea that a high return is not worth as much if the riskiness (volatility) of the asset value or return is also high. So a high-risk, high-return investment might have the same "risk-adjusted return" as a low-risk, low-return investment. To compare the returns of two investments, it is important to focus on the risk-adjusted returns.

agreements largely rely on government grants and public subsidies at different administrative levels of concerned authorities. These financing agreements start with EU funds (where eligible) and national, regional and local financial aid, with all sorts of SPV structures. These SPVs typically involve a mix of relevant local public entities, state-owned, non-bank finance companies and private information technology operation entities. This is often under a private management, irrespective of the public majority of the share capital.

France has ESPICs (Etablissement de Santé Privé d'Intérêt Collectif – Private Health Institutions of Collective Interest) – non-profit establishments including large/middle-size hospitals, retirement homes and residences for the disabled, which combine a mission of general interest with a private mode of management. ESPICs are private institutions (association, foundation, congregation or mutual) that participate in public health services, meaning they are subject to the same obligations as the public sector under the Ministry of Health. Remuneration for medical acts and social assistance comes mostly from the social security regime as well as various grants and subsidies, often corresponding to performance incentives under government health policy. The initial investment comes from charitable organisations' private donations and assets, grants from public authorities (state, region, municipalities) or bank financing, with the investment potentially backed by the public authorities' repayment guarantee.

VII. Alternative PPP structures

This section explores how to use innovative, alternative PPP structures to increase the financing available for PPPs, with hopes of helping the governments of EBRD economies gain a better understanding of potential financing alternatives for PPPs beyond the traditional financing structure.

7.1 Investment partnership

Another type of joint finance structure for PPP projects is an investment partnership. Depending on the legislative framework of a particular country, this could be in the form of a legal entity or a contractual arrangement. The main goal of this agreement is to establish the mechanism of how the parties should invest, manage deals and distribute profit within the scope of the project. This scheme is especially useful if one party is ready to provide financial resources and another has the necessary skills and knowledge required to implement a PPP project effectively, but lacks finance. This mechanism allows them to unite their resources and agree on terms of their participation in the project and in the SPV (or institutionalised PPP company), with the respective obligations of the partners to be set in a shareholder agreement. This may be a good alternative for wealthy countries where the technology or local capacity is not sufficiently developed, like some economies in the Middle East.

7.2 Financing as part of a PPP contractual package (stapled financing)

Another alternative PPP structure to facilitate finance, used in less developed countries, is for DFIs to make available to the winning bidder the financing for the PPP project under the same conditions for all candidates, as in the Scaling Solar World Bank programme.

Scaling Solar is a World Bank Group initiative that enables governments in developing countries to rapidly acquire and scale large solar projects with private financing. It includes a set of advisory services, technical assistance, standard contracts and documents, pre-approved financing and insurance/guarantee products developed by various components of the World Bank, relying on modelling and standard procedure. This initiative should enable states and companies to provide solar energy transparently and at the lowest possible cost, as evidenced by the recent experience of Senegal, which under this Scaling Solar programme reached a record price for sub-Saharan Africa of €3.80 and €3.90/kWh for two solar power plants with a capacity of 30 MW. This Scaling Solar programme is similar to the one previously executed successfully in Zambia (75 MW), while other applications of Scaling Solar projects are underway or have been achieved – for instance, in Ethiopia, Madagascar and Côte d'Ivoire (60 MW) and Togo (60-90 MW).

The standard documents for these projects come from the advisers of the World Bank Group in Washington and, more specifically, from IFC Advisory advisers who have worked on the Scaling Solar project since its inception. These contracts may be in line with the usual US contract standards for this type of transaction but are highly complex and the length of the texts, the power purchase agreement in particular, is better suited to the common law system than to civil law countries, especially considering the relatively modest size of the contracts envisaged (around 25 MW each) and the level of development of the concerned countries. Furthermore, these model contracts – particularly the power purchase agreement and the so-called concession agreement, exclusively containing the contracting authority obligations – may be viewed as unbalanced in favour of potential investors. This makes them riskier for the off-taker and the state, which must support, for instance, the consequences of non-delivered production in any event that is not the direct consequence of producer failure. Obviously,

this "all inclusive" type of contract is drafted in such a way to attract private sector investors and secure the financing of projects in countries where electricity is desperately needed and there is limited or no room for any negotiation as the entire deal is pre-set with the acceptance of all concerned IFIs, entities and advisers.

Countries contemplating the use of this kind of stapled financing – in which the same group of DFIs proposes the financing framework (including risk allocation) and then provides the financing and credit enhancement – should engage independent consultants to assist them and to seek alternative DFI financing, if more advantageous, under the Scaling Solar project scheme. This will help them avoid the risk of potential conflict of interest among the DFIs.

It should be noted that the various potential non-bank-lending financing, innovative financing and alternative models for PPPs can combine in infinite ways. For example, looking at the Scaling Solar project in Senegal, we can notice that the French industrialist Engie and the investor Meridiam won two photovoltaic solar energy projects in April 2018. Although Engie was to lead and carry out the construction and operation of the two solar photovoltaic power plants, a project company was set up that allocated 40 per cent of the capital shares each to Engie and Meridiam, while the Senegalese sovereign wealth fund FONSIS was to hold the remaining 20 per cent.

7.3 The flexible bid model

The flexible bid model is an innovative PPP structure that goes beyond traditional bank lending and allows for the competitive procurement of different types of finance, such as equity and debt. The concept of "superannuation public-private partnerships",[18] originally developed by the Dombkins brothers in 2013, proposed using Australian superannuation (pension) funds as the sole source of equity. In 2014 the concept evolved into the inverted bid model,[19] which focused on the reverse auction process for selecting the best financing option. After consulting with industry experts in 2015, the concept evolved into a more refined and comprehensive version called "the flexible bid model", which incorporated "equity (of all types) as well as debt, and clearly explained how these different finance types will be competitively procured".[20] Despite the lack of concrete realisation of the flexible bid model in practice (to the authors' knowledge), its conceptual elements provide useful insights into potential alternative PPP financing structures.

The flexible bid model, "led by investors, introduces a performance-based contract for the SPV manager, and unbundles the PPP components".[21] Under this model, superannuation funds and/or other equity/debt sources, seeking lower-risk investments, directly invest equity in national infrastructure. These funds act as the main investors in the project, instead of traditional sponsors, and hire a professional project manager to manage the SPV though tender. The SPV hires contractors and operators and procures lenders through a competitive bidding process, with the help of the relevant public authorities. In return, the public authority agrees to share some of the risks that are usually borne by the private sector in a traditional PPP by either guaranteeing the fund a minimum return on that investment or accepting the limitation of risks for the private investors – or both. Under this model, the traditional bidding process is reversed by fixing the terms of project financing through a funding competition prior to the construction, operation and maintenance tender or raising of any additional debt. In other words, the government tenders initially for the long-term owner-operator, followed by separate bids for construction, operation and maintenance and residual debt, unbundling the PPP components.

For the reasons stated below, the initiators of the flexible bid model believe it to be a better procurement process for PPPs than the traditional one, meeting both governments' need for a competitive process and investors' risk-return appetite, ultimately providing certainty and value for money for governments, patrons and investors.

The key elements of the flexible bid model PPP are as follows.

- **An unbundled procurement model and phased business planning process.** The government first selects the main provider of equity (the fund) following a direct negotiation or tender process. The fund will then incorporate the SPV and select a manager for the SPV, followed by the selection of the construction contractor and operator and finally the additional financing, if required. This allows the government to minimise the risk of choosing the wrong partner or solution, and to reduce the time and cost of tendering. It also allows the government to monitor the quality of each stage and to adjust the scope and specifications of the project as needed.
- **A competitive financing strategy that incorporates both equity and debt finance.** This means the government and the SPV, in close cooperation and in

[18] Dombkins, D. (2014). The Inverted Bid Model. Industry Super Australia, Complex Program Group, and IFM Investors.
[19] Dombkins, D., & Dombkins, P. (2013). Superannuation public private partnerships: SP3: a new financing and delivery model for Australian PPPs. Report to Industry Super Australia. November 2013.
[20] Complex Programmes Group. (2015). The Role of the Private Sector in Promoting Economic Growth and Reducing Poverty in the Indo-Pacific Region. Submission 154.
[21] UAE Public Policy Forum. (2019). Proceedings Report.

parallel with the above planning process, can seek and secure the best possible financing options for the project, from both public and private sources, such as grants, loans, bonds or equity. The government can also provide guarantees, subsidies or incentives to attract and retain investors and lenders. The fund will be the owner (sole owner or together with government bodies, international finance institutions and/or non-governmental organisations) of the SPV, providing the equity, with a limited or no banking loan. The financing strategy can also be flexible and adaptable, to reflect the changing risk profile and cash flow of the project.

• **A performance-based contractual model that aligns parties and reduces contract management costs.** The government first selects the main provider of equity (the fund), with which it signs a performance-based main PPP contract. The fund will then incorporate the SPV as per existing local corporate legislation and select a manager for the SPV who will be competitively tendered for a fixed period using a performance-based governance contract. The SPV manager will then select the construction contractor and operator following the same performance bases and, finally, the additional financing if required. The SPV manager will report to the SPV board, which consists of representatives from the fund and other shareholders. A performance-based contract means the government and the SPV can agree on clear and measurable performance indicators and targets for each stage of the project, linking the payments and penalties to the achievement of these outcomes. This ensures that the parties are motivated and rewarded for delivering high-quality services and products, and that the government can monitor and enforce the PPP contract efficiently.

The governance structure used in the flexible bid model creates transparency and reduces the risk of sponsors and lenders making excessive profits and imposing development charges, offering a win-win solution. The model has reasonable risk to be supported by the SPV in exchange for a reasonable profit, dealt with in a transparent way. There is no reason to reduce the efficiency, as in such cases it still generates additional transparent profit even if not as excessive as it could be with some sponsors' financial black box models, where the only fixed figure is a very high return on investment.

Additionally, under the flexible bid model, the government and the SPV can adopt progressively incorporated, expanded, value-capture strategies that support long-term funding, such as user fees, tolls, taxes, levies, land value uplift or asset recycling. These strategies can help to fund the project and create positive social and economic impacts for the community. In essence, the fund can give the government the funds needed for green or other specific development projects, while also offering the funds' subscribers a reasonable return without excessive risks. In return, the government may take a large share of the risk, with a very reasonable financing return going to the SPV, sufficient to satisfy shareholders and their subscribers (retirement funds or public institutions) eager to invest long-term without excessive risk and a specific objective in conformity with the SDGs.

A flexible bid model could enable a genuine partnership approach between the public and private sectors, with reduced risks for the private side and reasonable costs for the government. This model could attract institutional investors, such as life insurance companies and pension funds, which seek regular but reasonable returns on their investments, while also delivering social, economic or environmental benefits that align with the objectives of the fund and the government.

The problem with these flexible bid models and innovative PPP structures is that they may generate strong opposition from pension funds, as they may be unwilling or legally/contractually unable to take on greenfield project construction and commercial risks. They may also not be willing or able to assume direct responsibility for managing project development and operation, even at the SPV board level. Other opposition may come from sponsors and financiers, who may fear losing their usual dominant role and profits in the traditional PPP project framework.

7.4 The mutual investment model

The mutual investment model (MIM), developed in Wales, is an innovative way to invest in public infrastructure. The Welsh government designed this model to finance major capital projects amid a scarcity of capital funding.

The MIM supports additional investment in social and economic infrastructure projects and helps to improve public services in Wales. Under MIM schemes, private partners build and maintain public assets. In return, the Welsh government pays a fee to the private partner, which covers the construction, maintenance and financing of the project. At the end of the contract, the asset is transferred into public ownership.

During the construction phases of projects, private partners help the Welsh government create apprenticeships and traineeships to benefit local communities.

Current MIM schemes include:
• redevelopment of Velindre Cancer Centre, Cardiff
• work to complete the dualling of the A465 from Dowlais Top to Hirwaun
• additional investment in Band B of the 21st Century Schools Programme.