

# **OVERCOMING CONSTRAINTS TO THE FINANCING OF INFRASTRUCTURE**

## **Success Stories and Lessons Learned: Country, Sector and Project Examples of Overcoming Constraints to the Financing of Infrastructure<sup>1</sup>**



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## I. KEY MESSAGES

- i. *Developing a successful PPP program is a complex undertaking and involves a number of key challenges for developing countries. In order to establish an environment conducive to PPPs, governments are required to take a number of steps, briefly described below, all of which are important building blocks to the establishment of a credible PPP program.*
- ii. *At the very basic level, investments designated for PPP arrangements need to be fit with a country's growth and development strategy. PPP projects that are anchored in a fully-fledged, public national investment program provide greater assurances to investors of political buy-in and that economic fundamentals have been prioritized.*
- iii. *Legal and regulatory frameworks for PPP must provide adequate protection and obligations for all parties involved in a PPP arrangement--government, investors and lenders alike--in particular in light of the long-term nature of infrastructure projects and the need to adapt to changes throughout the lifecycle of a PPP project*
- iv. *Institutional framework must provide the support and incentives for proper PPP implementation, with viable coordination between the different parts of government involved. The institutional framework needs to drive proactive PPP development, while providing sufficient time to prepare PPP projects. But perhaps more fundamentally, efforts are needed to improve the underlying investment climate, including the transparency and predictability of the regulatory regime.*
- v. *Once good projects are selected, sound project structuring is needed, including adequate risk allocation, measurable performance indicators, and flexibility to adapt to change. Project structuring requires experienced, sophisticated transaction advisers, which can be expensive. However, failure to buy in the best advisers is usually far more costly, with failed or overly expensive projects resulting.*
- vi. *A clear trend that has emerged over the last years, underscores the need for new, long-term investors to participate in infrastructure funding. To date, debt financing by banking sector has contracted in many regions. As a result, the market is looking to mobilize financing from new types of investors who are well capitalized and seeking longer-term returns.*
- vii. *Finally, major successes in the area of infrastructure PPP projects require perseverance and long-term commitment by governments to achieve a meaningful paradigm shift. It takes an extended period of time for private operators to buy into PPP model and even much longer for projects to result in improved services at lower cost to the government.*

## II. OVERVIEW

1. **Traditional sources of infrastructure finance have been constrained since the financial crisis.** In many parts of the developing world, public budgets - the largest contributor of infrastructure finance - have not recovered from the last financial crisis, exacerbating the gap in the market for infrastructure finance. Bank debt financing remains below pre-crisis levels as the banking sector redefines its risk appetite and makes structural adjustments in anticipation of statutory requirements such as Basel III and national-level regulations. Similarly, the International Financial Institutions (IFIs) are facing capital constraints that are forcing them to decrease their commitments substantially since the ramp-up in 2009 and 2010. IFIs have tended to finance about 10 percent of the developing world's infrastructure investments or 5 percent of total needs.<sup>2</sup> Reinvigorating the supply of infrastructure within the developing world requires supplementing traditional sources of official finance with new sources of equity and debt finance. It means pairing existing instruments with innovative tools, such as MDB guarantees, to reduce risks, lower the cost of sovereign borrowing, extend tenors, and strengthen market and project environments. On this menu, public-private partnerships (PPPs) represent one of the many promising instruments to meet the challenge of crowding finance in.
2. In most parts of the world, governments have traditionally shouldered the lion's share of infrastructure investment with tax revenues. Over the last decade **urbanization and fiscal decentralization have shifted much of the responsibility for infrastructure and utility investment to local governments.** However, fiscal transfers and local tax revenues have not grown commensurately with the increased responsibility vested in local authorities, and for most cities in the developing world revenues from basic service provision fail to recover costs. For example, in water supply and sanitation, only eight out of twenty large cities in India recover operations and management costs through user fees. None recover capital expenditure let alone depreciation. Underinvestment and the continued dependence on state and national transfers remains the norm for urban infrastructure throughout the developing world. In addition, jurisdictional issues exacerbate the complexity of planning and financing for municipal projects, which often cover multiple jurisdictions. Government capacity limitations in the design, monitoring and enforcement of contracts are often most acute at local levels.
3. The last 10 years have seen **a rise of PPPs in developing economies** as a means of crowding in investment and expertise from the private sector. Looking at the broader picture of private sector investments in developing countries, private capital has contributed between 15 and 20 percent of total investment in infrastructure during that period.<sup>3</sup> PPPs are back on the rise in the aftermath of the 2008 global financial crisis: PPP investments peaked initially in 1997 at \$60 billion, falling to only \$30 billion per year on average during FY02-06; they subsequently increased to \$79 billion per year during FY07-11.<sup>4</sup> PPPs have now spread across the globe: 134 developing countries implemented new PPP projects in infrastructure between 2002 and 2011.

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Bhattacharya A, Romani M, and Stern N (2012), Infrastructure for Development: Meeting the Challenge, CCCEP, LSE and G-24 Policy Paper.

Delmon, Gassner, Kacaniku, Baghat (2010), Overview of PPPs in Infrastructure in Developing Countries, Background Note for G20 Seoul Meeting.

World Bank Private Participation in Infrastructure (PPI) Project Data Base, cited in IEG Evaluation of WBG's Support for PPPs (2013).

Although initially restricted to infrastructure, PPPs have increasingly moved into the provision of social infrastructure, such as schools, hospitals, and health services.

4. **Conceptually, PPPs are an instrument to respond to market failures while minimizing public sector short-comings as a service provider.** As a general rule, private ownership is to be preferred where competitive market prices can be established. Under such circumstances, the private sector is driven by the discipline of the market. However, market failures can justify public ownership, for example, in roads, water distribution, or education. But the public sector - which delivers these services because of market failure in the first place - may subsequently struggle with operating efficiently or containing costs, or may lack the capability to achieve a desired quality standard, or both. These arguments can be used to motivate PPPs as an instrument to combine the relative strength of government and private provision in a way that responds to market failure but minimizes the risk of inefficiency.<sup>5</sup>
5. Regulatory failings represent the top concern of foreign direct investors according to a MIGA/EIU Survey of global investors in developing countries conducted in 2012.<sup>6</sup> Economic regulation of tariffs and service quality requires independent authority, institutional integrity and capacity to monitor and enforce contractual obligations. Relatedly, government behavior—such as historical handling of contract disputes, expropriation and rules governing repatriation of capital—affect the levels of investment in infrastructure. World Bank research shows that infrastructure investment levels are highly sensitive to sovereign risks, especially in brownfield investments and those sectors and project types with higher retail risk, particularly dependence on local currency earnings from household consumers.<sup>7</sup> At the individual investment or project level, a number of constraints stand between the demand for investment and the financial closing of a transaction. These include, among others, inadequate supply of viable projects. Since project preparation costs are high, investors are less likely to bid on projects in a new market without a pipeline of future projects. Delays in, and inappropriate handling of, land acquisition issues further delay projects, particularly in transport, energy transmission and other large network projects. Consequently, building strong project pipelines with sufficient economic, financial, technical and environmental feasibility studies is critical.
6. **But PPPs are not a panacea.** The literature points to the negative effects on public budgets because of contingent liabilities not being adequately assessed, insufficiently reported, or accounted for off-balance sheet. Furthermore, PPPs are generally considered to be more expensive than purely public financing due to higher private sector borrowing costs and high transaction costs in general. Moreover, PPPs are likely to produce inadequate risk allocation due to lack of competition during bidding and be subject to renegotiations which may put the public sector in a weak position and subsequently lead it to accept undue risks. A country's PPP engagement also demands high capacity and skill levels from the public sector authorities—or as the G-20 High Level Panel put it, — “PPP require their own infrastructure”.<sup>8</sup> All these technical skills, however, can only be put into practice when political commitment— often the single most

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<sup>5</sup> Ter-Minassian (2004) Public-Private Partnerships, IMF

<sup>6</sup> MIGA: World Investment and Political Risk, 2012 (<http://www.miga.org/documents/WIPR12.pdf>)

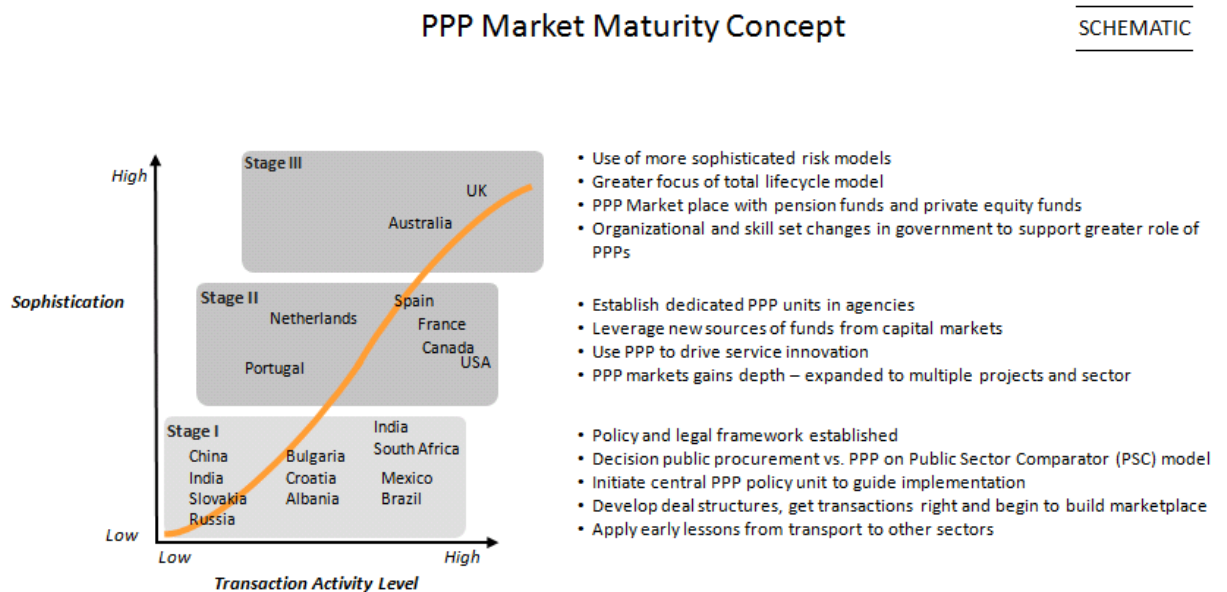
<sup>7</sup> Fay M, Toman M, Benitez D and Csordas S (2011) Infrastructure and Sustainable Development.

<sup>8</sup> High Level Panel on Infrastructure (2011)

important decisive factor in PPP roll-out—exists and continues to exist throughout the PPP development process and life time.

7. **Countries and markets need to be sufficiently mature to apply the concept of PPPs wisely.** This implies that government authorities need to be sophisticated enough to develop sector reform policies, assess fiscal risks associated with PPPs, base their procurement decisions on comprehensive value-for-money assessments, and have impartial transaction structuring capacity at hand to make PPP deals bankable and sustainable. In contrast, markets also need to be sufficiently liquid, that is, rich in transactions with enough potential investors that have adequate regional experience bidding for PPPs in an economy with available long-term capital.
8. Three distinct stages of PPP maturity are observed (see Figure 1)<sup>9</sup>:

**Figure 1: PPP Market Maturity Concept**



Note: Chart serves illustrative purposes and location of individual countries may have changed since publication

9. External technical and policy advice (e.g., from entities like the World Bank Group) can enable countries to move up the scale. Arguably, there is also a stage zero, where the World Bank Group supports individual transactions with expertise and funding so that PPP transactions, even in countries with very low technical or institutional capacity and little prospect of having a programmatic PPP approach in the near future, become possible (e.g., in LICs, frontier, or conflict-affected countries). The World Bank Group's private and public sector arms respond to the challenges that developing countries face with regard to PPPs, mainly by helping them make smart choices about market structure and sector reform, private sector involvement, and type of PPP, improving the enabling environment, and in executing specific PPP transactions, thus allowing these countries to become more sophisticated and mature PPP markets.

<sup>9</sup> Eggers and Startup (2006), Closing the Infrastructure Gap: the Role of PPPs, Deloitte Research Study, Deloitte

10. **Those countries that are most successful in attracting finance from the private sector have established prioritized programs of investment opportunities.** These are characterized by a number of features, including clear political support, a proper legal and regulatory structure, a procurement framework that can be understood by both procurers and bidders, and a credible project timetable. These country programs are more than just marketing. They eliminate key frictions, such as long project lead times and unclear political risk, which directly impact the viability of the business case.
11. The literature on PPPs is abundant and covers best practice for most—if not all—steps of a country engaging in as PPP, ranging from fiscal risk assessment to performance. However, *ex post* assessments of how PPPs worked out and delivered on their promise of efficiency gains and increased access and service levels are rare, and if available, are only partial. At most, there are some isolated studies with focus on specific subsectors or regions, apart from more systematic research on experience with PPPs mainly in OECD countries. This paper does not attempt to provide a comprehensive evaluation of PPPs performance in emerging markets, rather it illustrates how some of the above non-financial risks have been handled in structuring individual infrastructure deals. Basically, these specific cases can be of interest to practitioners from the perspective of what concrete steps proved to be “deal-breakers” within the project preparation and implementation framework. The paper draws on the data base of IFC involvement in over 60 PPPs from 35 developing countries, representing approximately \$10 billion in investment, with fairly representative coverage across regions and sectors.
12. Apart from case studies, there are brief overviews of country-level efforts aimed at creating a more conducive environment for PPP structures. The next chapter actually looks into four country approaches, starting with the Brazilian experience in the road sector, perhaps one of the most systematic applications of the concession model. There has been a clear paradigm shift for private sector involvement in Brazilian road infrastructure over time, with private operators gradually buying into the model and resulting in improved services at lower cost to central government. Another major factor in that shift is attributed to strong capacity in the public sector to structure PPPs, including the role of the national development bank, BNDES. The approach by India is more recent, hence still under study, and also quite different – trying to advance Infrastructure Debt Fund (IDF) structures to bring in new types of investors (such as pension funds and life insurance companies). If successful, India’s approach may well provide a framework for future funds, also as a model for the rest of the developing world. The chapter looks into the impact that the opening of China to private participation in water infrastructure has had on this sector globally. Noteworthy is the fact that almost 55% of water sector PPPs in China are the result of South-South cooperation. The overview concludes by looking into Saint-Petersburg’s pioneering role in PPP structures that flexibly adjusted to market turmoil and tapped into special-purpose federal subsidies to close a number of deals.

### III. COUNTRY / SECTORAL APPROACHES

#### A. BRAZIL: LESSONS FROM BRAZILIAN HIGHWAYS

13. Despite Brazil's size and influence—it is the sixth largest economy in the world and is predicted to become the fourth largest by 2050—the country faces a substantial infrastructure gap that threatens to limit growth and competitiveness. This is especially true for the transport sector. Without a viable railroad network, and with many stretches of unpaved roads, trade costs inevitably increase. This ultimately prevents the country from reaping greater benefits from international trade. To develop infrastructure that will allow Brazil to achieve its promise, the Brazilian Development Bank (BNDES), the Inter-American Development Bank (IDB), and IFC collaborated to create the Private Sector Participation Program (PSP Brazil) in 2008<sup>10</sup>. The PSP Brazil alliance implements innovative public-private partnerships and fosters best practices through the provision of consulting services to regional and municipal governments.
14. The first PSP Brazil project--a ground-breaking concession to expand, rehabilitate, operate and maintain 667 kilometers of federal roads in the state of Bahia--closed in October 2009. It succeeded in introducing a new contractual structure that served as model for the development of other federal and state road transactions. In particular, this transaction (BR116/324, the “Bahia contract”) established the performance-based concession as a model for later federal and state road transactions. The concession of the BA093 highway system, which closed in August 2010, was also precedent-setting. It became the first PPP to be structured for an entire highway system, the first to encompass an entire metropolitan area, and the first to adhere to the Equator Principles, guaranteeing that the project will be developed in an environmentally and socially sustainable manner. Both of these transactions were expected to improve economic resilience and encourage broader development throughout the region, including through the sought-after expansion in trade. Equally important, they were to improve safety and access to basic services such as hospitals and schools for millions of Brazilians.
15. **The Brazilian road concession model has gone through significant changes, beginning with Bahia contract developed by BNDES and IFC.** The evolution of the model can be attributed to Brazil's experience in the first road concession contracts, where the quality of the services under contract could not be maintained over the long term without increases in tariffs to fund new rehabilitation of existing infrastructure. There was also a general move internationally, throughout the 1990s, toward performance-based contracts for infrastructure.
16. **The innovations introduced by the Bahia contract helped set a new national standard.** Its main innovations are threefold: a focus on performance parameters; introduction of the concept of the “traffic trigger”; and the “re-equilibrium discount.” With the focus on performance parameters that can be objectively measured, we see the use of short, medium, and long term objective performance parameters. The private operator has the freedom to employ innovative technologies and construction, methods, and materials. This introduces efficiency and accountability into the contract. These performance parameters create a clear expectation of outcomes, generating transparency both for the private operator and the regulator. By introducing

<sup>10</sup> Henrique Amarante da Costa Pinto (2012) Lessons from an Expert on Brazilian Highways, Handshake #7, IFC Quarterly Journal on PPPs



the concept of the “traffic trigger” into the contract, we see when demand requires an investment in increased capacity. Specifically, it identifies a volume of traffic that, if reached, obligates the concessionaire to increase roadway capacity in order to maintain a minimum level of service to the users. This means that the contract does not need a schedule of pre-determined investments, as was the case in the first contracts. The increase in capacity is a result of maintaining a pre-agreed level of service as traffic exceeds certain pre-agreed levels.

17. This contract was the first road concession developed by the Brazilian federal government in northeast Brazil, the country’s poorest area. Initially conceived as a PPP, the project was ultimately developed as a 25-year concession financed by toll revenues. Its structure was based on performance, with the concessionaire responsible for meeting various road condition and operational performance standards. This project promoted international participation in Brazilian road concessions and resulted in strong international interest. Two bidders prequalified and the auction was won by the Rodobahia consortium, a partnership of Spanish Isolux Corsan and local companies. The Rodobahia consortium requested a toll rate of \$1.23 for a two-axis vehicle, 21 percent lower than the maximum asking price of \$1.50. Under concession, certain sections of the roads will be expanded to two lanes if specific traffic thresholds are reached.
18. Finally, the “re-equilibrium discount” is used to reduce the tariff when performance parameters are not being met. A table of discounts is predefined in the contract. The discounts represent the resources that are not invested as a result of a failure to meet performance parameters. It functions independently from the application of contractual penalties. Under a penalty, the concessionaire is subject to a reduction in payment for failing to meet performance parameters established in the contract. To guarantee the application of these contract innovations, the regulator must apply a robust structure to measure the performance parameters and to apply the instruments established in the contract.
19. The contract also resulted in another significant innovation: the allocation of risks in relation to the restoration of economic-financial equilibrium. The contract clearly established which risks each party was responsible for assuming, and the allocation of these risks was linked to restoration of economic equilibrium. The original proposal for Bahia concession was a complete shift from the use of the static economic equilibrium model based on prices, traffic estimates and return on investment fixed at the time of bid, to a dynamic model called the “marginal cash flow model,” which uses data available at the time of the event to restore equilibrium.
20. There has been a paradigm shift for private sector involvement in Brazilian road infrastructure over time, and the model will continue to evolve. It’s useful to look at the history. Initially, the private sector was interested in building roads. They did not consider a concession as a delivery of services, but as a works contract. As time passed, private operators began to understand that concession was a different business from building infrastructure, and many of them developed specific business entities to respond to the concession model. Most recently, the Brazilian road sector has become very competitive: for example, one project of only 125 km, developed by BNDES and IFC in Bahia in May 2010, attracted nine bids, including from international companies, resulting in a discount of 31 percent. The project was to mobilize \$455 million in private investments, with the winning consortium having pledged to undertake emergency repairs and rehabilitation of the highways within the first six months of the concession and to

expand capacity after the third year. The system will be completed by 2020. In January 2012, another project structured with support from BNDES, BR101 ES/BA, attracted eight bids, resulting in a discount of 45 percent.

21. To conclude, the evolution of road concession model and efforts by Brazilian Government have tremendously improved country perception of international investors. Brazil is becoming a center of excellence capable of attracting international investment for infrastructure, particularly as developed markets are looking for opportunities further afield. Government has declared that without private investment it will be impossible to respond to its infrastructure needs. To that end, it has recently launched a large road and railway concession program. In the road program alone, 7,500 kilometers will be concessioned, equivalent to 140 percent of the federal road network.

## **B. INDIA'S INFRASTRUCTURE DEBT FUND**

22. India's infrastructure deficit is creating significant challenges for the country's continued economic growth. Accordingly, India has to significantly step up and improve the quality of infrastructure investment going forward in order to reach double digit GDP growth. Indeed, India plans to spend more than US\$1 trillion over the next five years, representing approximately 10 percent of GDP annually<sup>11</sup>. But current projections indicate a massive shortfall in funding – particularly in debt financing – that will require the country to find innovative ways to bring new sources of both domestic and international investment into the marketplace in order to close the funding gap.

### **i. Setting the stage for investment**

India's Ministry of Finance set the stage by announcing guidelines for two types of Infrastructure Debt Fund (IDF) structures that show significant promise in creating an environment for attracting new investment into the sector. Both face significant challenges but, if successful, may provide a framework for future funds, not just for India, but also as a model for other developing economies.

23. However, India faces a number of fundamental challenges that will need to be overcome for the IDFs to make a positive impact. One is the need for new, long-term investors to participate in infrastructure funding. To date, debt financing has largely been led by the banking sector which – with significant assets already on the books of domestic banks - is fast approaching their debt limits while many international banking institutions have largely withdrawn from project financing in the wake of financial crisis. As a result, the market is looking to mobilize financing from new types of investors who are well capitalized and seeking longer-term returns.
24. The country must also seek new ways to reduce the risk of infrastructure investment. In part, this will require new approaches to enhancing the credit ratings of infrastructure projects to make them more attractive to risk-averse investors who are largely unwilling to extend credit to projects outside of the 'safe' category of AA or AA+ ratings. For foreign investors, the challenge

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<sup>11</sup> Arvind Mahajan (2012), India's Infrastructure Debt Fund in "Infrastructure Investment: Bridging the Gap", KPMG

is compounded by the low credit ratings at the country and state levels, which are generally only slightly above investment grade. But perhaps more fundamentally, efforts are needed to improve the underlying investment climate, including the transparency and predictability of the regulatory regime.

## **ii. Creating an IDF Mutual Fund structure**

25. Both of the proposed IDF structures may well overcome these challenges. The first is a Mutual Fund style IDF that effectively allows investors to pool their resources across a range of infrastructure assets in order to reduce their risk. Investments can be made in any kind of infrastructure projects – from early stage through to late stage – and may be income tax exempt for participating sponsors. However, the structure also contains certain drawbacks. For example, the entire credit risk would effectively be shouldered by the end-investor with no opportunity for credit enhancement guarantees. The funds will also be limited to Rupee denominated units, resulting in currency risks for foreign investors who will need to include hedging costs into their calculations. This structure may be useful for investors who are willing to bear some additional risk in exchange for a higher return.

## **iii. An IDF Company**

26. The second planned structure would see the creation of a non-bank finance company (NBFC) that is effectively restricted to investing in PPP projects that have passed the one-year commercial operations threshold and can therefore offer a more focused investment outlook as opposed to purely green field projects. It can also put in place credit enhancement mechanisms to attract different categories of investors. As a result, the structure may be able to achieve a credit rating that would be acceptable to more risk-averse investors. The NBFC may also issue bonds in both Rupee and foreign currencies, further reducing the risk for international investors. The NBFC will face a number of challenges. For example, the sponsor will be limited to less than 50 percent of the shareholding, meaning that other institutional investors will be required to take a stake in the fund. The forced focus on late-stage assets also means that investors are effectively limited to government sponsored assets and the market opportunity will therefore be reduced accordingly. The structure is likely to operate on thin spreads, with income tax exemption and lower capital adequacy norms expected to stimulate returns.

## **iv. Making positive progress**

27. Currently, the market is largely focused on the potential for the creation of a US\$10 billion fund through the NBFC model that was supposed to involve the government-owned India Infrastructure Finance Company Limited, the Life Insurance Corporation of India as well as a number of other Indian banks like the Industrial Development Bank of India. It is also expected to include the Asia Development Bank as a multilateral investor and possibly a large foreign bank. Both options may be pursued in parallel as investors may find attributes of each that reflect their investment strategy and risk profile. But regardless, the Indian government will almost certainly need to intervene in some way in order to attract the types of stakeholders and investors that will be necessary to overcome the sovereign credit challenges and provide guarantees on bonds for overseas investors.

## v. The path ahead

28. The period ahead will prove to be a critical watershed for the IDF plans as key players review their options and gain clearer insight into the guidelines that have been articulated by the Ministry of Finance. Given current turmoil in exchange rate markets, it was expected of the first batch of IDFs to be dominated by domestic investors but – with growing interest from international investors seeking exposure to the Indian infrastructure marketplace – there is every indication that significant international players may also participate in these structures, both to test the waters and to gain more experience in this rapidly emerging and potentially highly rewarding marketplace.

### C. TEN YEARS OF WATER PPPs: AN OVERVIEW

29. Private-sector participation in water sector projects in developing countries has expanded threefold during the last decade. With an average of 50 projects and \$2 to \$3 billion investment commitments per year, 535 water projects benefitting from private participation have reached financial closure over the last ten years. Commitments to water projects with private participation totaled about \$34 billion in that same period. The opening of China to private participation in water infrastructure and its emergence as the first water PPP market among low- and middle-income countries was certainly one of the most important changes during the decade. With 309 projects and \$8.2 billion in investments, China accounted for 58 percent of all private water projects by number and 23 percent by investment. In 2009, the last year for which data is available, China accounted for 80 percent of private water projects by number in low- and middle-income countries. Most of these projects were implemented under BOT agreements (about 200 of them).<sup>12</sup>

30. Latin America was the second most active region in terms of number of water PPPs: 113 projects involving investments of \$9.7 billion in 17 countries over the last decade. Two thirds of PPP activity was concentrated in the first half of the decade. Most projects were located in Brazil, Colombia, Chile, and Mexico. Most projects were water supply concessions (79), followed by water and wastewater treatment plants BOTs (17). Europe and Central Asia were also active in implementing new water PPP projects during the last decade: 14 countries signed 44 projects involving \$3.1 billion in investment. Eighteen were located in the Russian Federation. Most of these were for water utilities (40) and were implemented through management and lease contracts (27), concession (nine) and divestiture (four).

31. PPP activity was relatively less important in the three remaining regions: Middle East and North Africa, Sub-Saharan Africa and South Asia. In the Middle East and North Africa, 16 projects involving \$3.3 billion in investment reached financial closure; most of them were located in Algeria (13) and were BOTs for desalination treatment plants (nine). Sub-Saharan Africa had 15 projects involving investments of \$180 million in 13 countries; the majority was water utility management contracts (9). South Asia had 12 projects involving investments of \$378 million; all of them located in India. Eight were for water utilities and four for treatment plants.<sup>13</sup>

<sup>12</sup> Edouard Perar (2012) Ten Years of Water PPPs, Handshake #1, IFC Quarterly Journal on PPPs

<sup>13</sup> All calculations are based on data from the PPI Database (World Bank and PPIAF):

32. In addition to the shift in terms of geographical destination toward China, the geographical origin of private water operators has evolved during the last decade. Some multinationals from high-income countries have progressively withdrawn from water PPP projects in low- and middle-income countries to refocus on high-income countries and on less risky engineering, procurement and construction contracts. During the last decade, more than 55 percent of water PPPs were signed by private firms originating in low- and middle-income countries. This trend accelerated during the second half of the last decade, with more than 60 percent of new PPPs implemented by private operators from low- and middle income countries. A high proportion of South-South water PPP projects (59 percent by number) were for treatment plants in China while twenty-three percent were for water utilities in Latin America.
33. Most of the South-South water PPP projects involved intra-regional or domestic private operators; inter-regional South-South water PPP projects remain rare. These figures almost certainly understate the real scale of private sector service provision in general and the scale of South-South water PPPs in particular, since they consider only larger-scale private operations. Private operators also include small and medium-size distribution companies as well as informal operators that cover low-income urban areas. The size of operation and the fact that some operators belong to the informal economy make it difficult to document the situation. However, a World Bank report found 10,000 small-scale service providers in a limited sample of 49 countries (Kariuki and Schwartz, 2005) and an International Institute for Environment and Development study estimated that the global number may exceed one million (McGranahan and Owen, 2006).

#### **D. RUSSIA: LESSONS FROM PPP IMPLEMENTATION IN SAINT PETERSBURG**

34. Saint Petersburg, Russia's second largest city, with around 4 million people and a bustling economy, was one of the pioneers in implementing PPPs in Russia. It has, to date, closed five projects, and several more are in process. This process has not been easy; and the city has learned hard-won lessons along the way, including:

##### **Lesson 1: Start with the basics**

35. The city started with big, bold projects, like a €6 billion toll road and a €1 billion tunnel, followed by a €1 billion light rail line and a €1.2 billion airport expansion. The toll road and tunnel came to bid in late 2008, the worst possible timing for large infrastructure project financing. But the city responded by restructuring the tunnel project, so as to allow the concessionaire to finalize the design first, thereby delaying the search for financing until markets could recover. The toll road bid process was cancelled and the project broken up. The light rail project was also restructured to fit with evolving ridership in the city. Pulkovo airport, the last project to be launched, was the first to reach financial closure, likely because it had hard currency revenues and an existing asset and revenue stream, both advantages when financial markets are lean.<sup>14</sup>

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<sup>14</sup> Jeff Delmon (2012), Handshake #4, IFC Quarterly Journal on PPPs

## **Lesson 2: Maintain the vision while remaining practical**

36. Without distracting from these strategic projects, the city looked forward to a large portfolio of PPP projects and began creating a PPP framework. It passed a municipal law on PPPs and created a central unit to capture lessons learned. As teams gained experience in transaction procurement and closure, they moved on to the next project. While this is an effective way to use the skills developed among deal teams, it made it difficult to empower the central PPP unit, which did not have its own transaction-tested validation. The city allocated a PPP project to the central PPP unit to implement directly. This distracted the central PPP unit from its other functions of developing standard practices and other commodification. But it was an essential capacity building exercise and gave the PPP unit needed leverage.

## **Lesson 3: Seek financing where it is most attractive; avoid the myopia of normalcy**

37. As part of the federal government's effort to encourage PPPs, the Investment Fund was created, providing grants for strategic PPP projects to make them more financially viable. (This mechanism is similar to India's viability gap fund and the U.K.'s PFI credits). The city is one of the few entities to access the Investment Fund (for the toll road and the tunnel). When the airport came up for financing, the city looked to IFC and the European Bank for Reconstruction and Development, as well as Russian banks like Vnesheconombank and VTB. When the toll road hit the financial crisis, the city got creative, using the Investment Fund, issuing city infrastructure bonds backed by federal guarantees to fund part of the road, and looking to Russian banks to finance the PPP portion. Some argued that the city should have sought international financing, but the soft international financial markets, foreign exchange risk, and the success of similar projects in India using local financing, argued in favor of the approach taken.

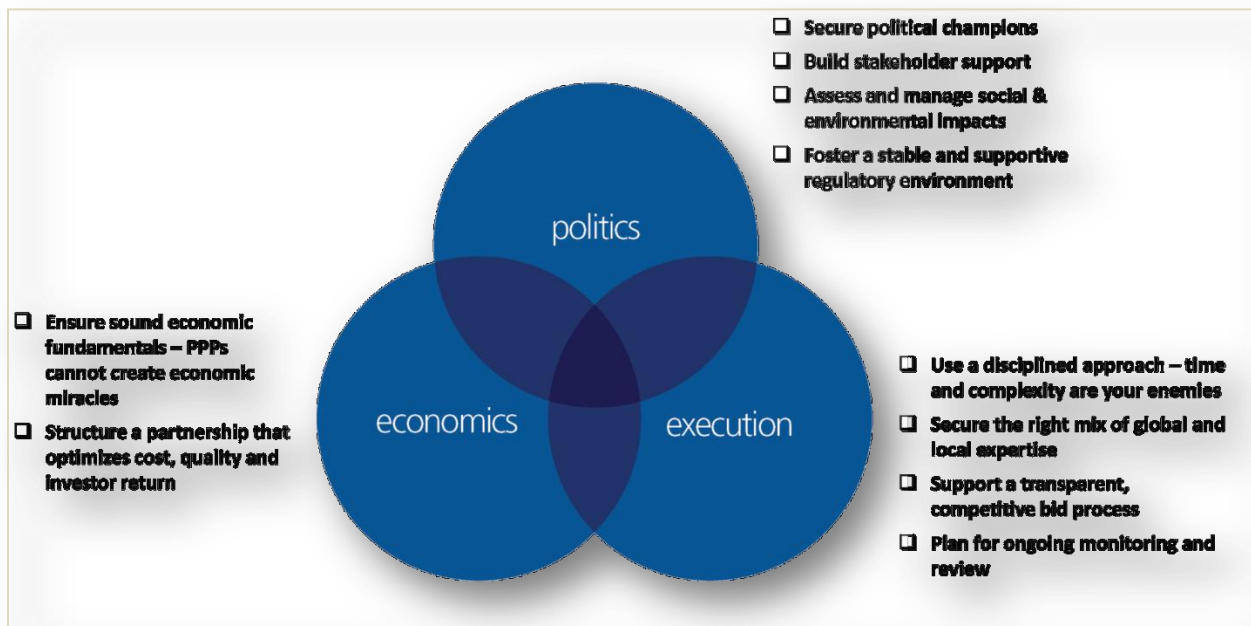
## **IV. A FRAMEWORK FOR PUBLIC-PRIVATE PARTNERSHIPS**

Developing a successful PPP program is a complex undertaking and involves a number of challenges for developing countries. In order to establish an environment conducive to PPPs, governments are required to take a number of steps, all of which are important building blocks to the establishment of a credible PPP program. It is noteworthy that quite often failure to implement one step may delay the entire program or cause existing projects to break-down. For public and private sector operators contemplating partnership for the first time, PPPs can appear to be political and economic minefields, filled with technical complexities best left to experts. Furthermore, the sheer volume of advice and information on PPPs is intimidating and unwieldy.

38. A gap was identified in the midst of this wealth of detailed information: It was felt that private and public sector players could benefit from an overall framework for creating successful partnerships between these respective sectors. The framework should be simple and based on real experience, and it should give these players a comprehensive "checklist" to help them navigate the wealth of critical issues, information, and advice on PPPs. An attempt to develop such a framework has been made by reviewing the experience accumulated within IFC by its PPP advisory unit.

39. To define and test the framework, more than 60 PPP projects in over 35 developing countries were reviewed, spanning over the period of 7 years, representing approximately \$10 billion in investment, and delivering improved services to more than 30 million people. The defining feature of all these projects was a long-term partnership between the public and private sectors to deliver a public service, with some transfer of risk to the private partner.<sup>15</sup>
40. Ranging from hospitals in Africa to toll roads in South America to hydroelectric projects in Europe, and including both successful and failed projects, our case experience offers a rich and diverse array of lessons for anyone contemplating partnership between the public and private sectors. In fact, at the end of each project, IFC teams identified a handful of “lessons learned,” which were compiled into a database of over 350 lessons and then systematically analyzed. Review of other IFC projects further shaped this thinking.
41. Lessons fall into three broad categories: economics, politics, and execution. These categories represent the three fundamental forces that drive the success or failure of PPPs. Economics, politics, and execution are the spheres of activity that countries must understand and manage if the projects are to be successful. (See Figure 2). An understanding of these forces is grounded in real case experience over the past seven years. From this experience, specific lessons have been identified within each of these spheres.

**Figure 2: Framework for Building Successful PPPs**



<sup>15</sup> Florizone R, Carter L, A Winning Framework for Public-Private partnerships: Lessons from 60-Plus IFC Projects, Smartlessons, IFC Publication, April 2013.

## LESSONS LEARNED:

### A. Economics

#### *1) Ensure sound economic fundamentals.*

42. Governments sometimes see PPPs as a way to rescue financially challenging projects. While PPPs can indeed improve project economics, basic economic assumptions such as revenues, costs, and level of investment must integrate into a reasonable and sustainable business case. An example is a successful African water project where the customers' ability to pay was the critical issue. It determined cash flow and the amount of debt, driving the overall size and success of the project. In contrast, a European toll-road project died when political leaders insisted that two extra lanes be added, and the subsidy required would have been enormous. PPPs can deliver successful and financially attractive projects—but they can't perform economic miracles.

#### *2) Structure the partnership to optimize cost, quality, and investor return—in other words, to achieve both the public policy and business objectives.*

43. There are many partnership options to choose from, ranging from conventional procurement of goods and services to management contracts, through to full private ownership. The challenge is defining a partnership that meets the public policy goals while creating or strengthening a successful, sustainable business. Defining the right partnership requires knowledge of similar past transactions, understanding of the local market, and innovation. One example is an electricity project in a recently war-torn developing state. Given the poor condition of the infrastructure and the economic risks, attracting or establishing a fully private utility was not a feasible option. So a management contract, with both incentive and penalty payments, was negotiated with an international operator to oversee the existing utility. The project has resulted in improvements in both service and financial performance—meeting the public policy objectives while improving the business.

### B. Politics

#### *3) Secure political champions.*

44. Any project requires a champion: someone to articulate and refine the vision, guide progress, and advocate for support. For PPPs, political champions are particularly vital, given the significant public stake in them. Our teams repeatedly cite the importance of political champions, and it is rare for major projects to survive without them. This is most evident in high-profile or publicly sensitive sectors such as airlines, where carriers are often viewed as national treasures. In airline transactions in Asia, Africa, the Caribbean, and elsewhere, we have found waxing or waning political support to be the difference between project success and failure. A strong champion or multiple champions can make all the difference, as in a recent successful hospital project in Africa, where the team cited the strong support of both the minister of finance and the minister of health as a key reason for the project's success.



**4) *Build stakeholder support.***

45. PPPs typically feature a large assortment of interested and influential stakeholders, with diverse economic, political, social, and environmental concerns. Indeed, the majority of our projects cite stakeholder support as a critical element to project success or failure. But the most successful projects and leaders do more than just identify and manage stakeholders; they also develop a deep understanding of stakeholders' interests and optimize the business case accordingly. Two water projects in Asia illustrate this lesson vividly. Water is a particularly sensitive sector, and many water projects fail—not because of economics, but because of social, political, and environmental concerns. In one country, a key feature of the project was a legal requirement that the private partner be 60 percent locally owned. The project moved forward successfully and is now yielding fresh water, with better service and lower rates to residents. In a second country, a lack of local investors contributed to public unease, which was a key driver of the project's ultimate failure and termination.

**5) *Assess and manage the key social and environmental impacts.***

46. Attention to social and environmental issues is a precondition for success, and is one of the first things to consider in accepting or rejecting a project. Addressing social and environmental issues is not just the right thing to do; it is also good business, with major projects unraveling when these issues are not fully considered. An example is a European hydroelectric project that was shelved because of specific concerns regarding water levels. Through a technical redesign, the team was able to solve these issues, and the project was restarted and successfully completed.

**6) *Foster a stable and supportive regulatory environment.***

47. A sound regulatory environment is often a condition for the success of a PPP. This is particularly true in sectors where fundamental elements of the business case—such as prices—are driven by regulation, and a stroke of the pen can create or destroy a business. In Southeast Asia, a program to foster private sector participation in rural electricity production focused first on establishing a supportive regulatory environment, including clear guidelines for subsidies. The program has resulted in lower cost and increased access and reliability, and it has stabilized the previously unpredictable, large, and unsustainable subsidies required for this service.

**C. Execution**

**7) *Use a disciplined approach—time and complexity are your enemies.***

48. A disciplined approach to project management is valuable in any project. But it is particularly important in PPPs, where transactions can be complex and timing is often critical because of limited political windows. An example is a failed power generation project in South Asia, where a project was terminated when a new government was elected. Experience suggests that the longer a project takes, the less likely it is to succeed. What is needed are clear project timelines and accountabilities as well as strong orchestration of external advisors.

**8) *Secure a mix of global and local expertise.***

49. The quality of teams is particularly important given the potential technical, economic, and political complexities inherent in PPPs, and having the right balance of global and local expertise is critical. Global experts can bring critical knowledge and best practices from other sectors or geographies—expertise that is not easily obtained elsewhere. Perhaps even more important is the presence of local, on-the-ground capabilities.

**9) *Support a transparent, competitive bid process.***

50. Unsolicited bids and noncompetitive processes are often tempting—either for governments wanting to move quickly or for companies looking to gain an advantage. For large PPP contracts, transparent, competitive bid processes are needed. Not only is it good business practice, but also anything less risks undermining long-term public support of the partnership. There are circumstances where sole-bidder negotiations can be advantageous to governments, but these are exceptions to be managed with care.

**10) *Plan for ongoing contract monitoring and review.***

51. Partners in PPP need to have the capacity to monitor and manage their contracts, ensuring compliance and resolving disputes. They also need to contemplate the possibility of renegotiation as the situation changes over the years. The need to renegotiate is not necessarily a sign of failure; it also can result from projects that are overly successful. An example is a successful Latin American hospital project, where improvements to services increased the demand beyond the original business case, encouraging the government and the private partner to revisit the level of subsidy. For governments, the capacity established for PPP monitoring and review can also provide a base of expertise for undertaking further PPP projects.

***Putting the framework into action***

52. Once good projects are selected, sound project structuring is needed, including adequate risk allocation, measurable performance indicators, and flexibility to adapt to change. Project structuring requires experienced, sophisticated transaction advisers, which can be expensive. In the UK, arguably the most efficient PPP market in the world, these costs have been estimated to amount to some 2.6% of the capital costs for a given project. The average costs in middle income countries are estimated to run around 2.5 - 4% and 3 – 10% in lower income countries. However, failure to buy in the best advisers is usually far more costly, with failed or overly expensive projects resulting.<sup>16</sup>

53. These hard-won lessons provide a practical framework for building successful public-private partnerships. Policymakers and investors should watch for “red flags” in each of the three spheres, indicating areas to focus on. Box 1 suggests 12 questions that government policymakers or investors might ask, with a “no” response indicating a red flag. Perfect answers are not required for every question. For example, there was a European health-care project where the

<sup>16</sup>

Jeffrey Delmon, The World Bank, PPIAF, & Wolters Kluwer, 2009, Private Sector Investment In Infrastructure

health minister and project champion changed five times. Despite these political weaknesses, the project nevertheless succeeded because of its strength in other dimensions. However, while two or three red flags may not be a deal killer, if over half of the questions in Box 1 are answered with a “no,” then it might be worth re-examining whether undertaking a PPP at that time would be appropriate.

54. Ultimately, the challenge for leaders is to deeply understand and address the three spheres—economics, politics, and execution—in an integrated way. Chief executive officers need to understand that political issues and stakeholder interests are just as important to a politician as shareholder value is to a chief executive officer. Political leaders, for their part, need to understand that chief executive officers and PPPs can’t create economic miracles. With this understanding, true partnerships will grow and flourish.

### **Box 1: Questions to Reveal Red Flags**

#### **Economics**

- Are the basic economics of the project strong (that is, does it have a good economic rate of return)?
- Does the project have small fiscal implications compared to the government budget (or, better, would it be a net fiscal contributor)?
- Is the government, or off-taker, seen as creditworthy by investors? Or could insurance or guarantees effectively compensate for poor creditworthiness?

#### **Politics**

- Is there both top-level political support (president, minister of finance) and support from the relevant line ministries?
- Is the project supported (or at least not opposed) by a broad spectrum of the key stakeholders (politicians, unions, companies, consumers, nongovernmental organizations)? Has adequate and meaningful consultation been undertaken?
- Can the project proceed now without further approvals from the country’s Parliament or other legislative body?
- Is the current government expected to be in power for more than a further 12–15 months?
- Has the country been free of high-profile nationalizations (direct or through regulation) in the past five years?

#### **Execution**

- Has adequate preparatory work been done (for example, an economic and social feasibility study, land acquisition, and so on)?
- Is the project part of a larger program of PPPs?
- Is there a single government entity responsible for implementing PPPs, and does that entity have a track record of successful execution?
- Have reputable transaction advisors been retained?

## V. CONCLUSIONS

55. Developing a successful PPP program is a complex undertaking and involves a number of key challenges for developing countries. Such engagement demands high capacity and skill levels from the public sector authorities, and requires a holistic approach in terms of setting economic fundamentals right, having the appropriate legal and regulatory framework, as well as maintaining political commitment in a sustained manner. Project structuring itself requires experienced, sophisticated transaction advisers, and this is the area where IFIs can contribute in a significant way, especially in countries with lower capacity.
56. Recently, many new infrastructure financing schemes have been popping up around the world as a result of experimentation with innovative approaches to long-term financing. This trend creates a wealth of new experiences and lessons that will undoubtedly help infrastructure industry evolve and mature, and transmit those lessons along the market maturity curve. One of the prominent trends is renewed interest in attracting institutional investors – pension funds and insurance companies in particular – to add more liquidity into the market. However, the reality is that these new players demand even more sophistication from project structuring, than traditional investors.
57. Governments in emerging markets and developing countries are increasingly recognizing the need to create practical incentives in the market to drive infrastructure development. Much action is underway in these countries, as illustrated in this paper, with new models and approaches continuing to emerge. But with a variety of different financing models now on the table, governments need to focus on identifying the right mix of incentives and approaches to tailor them to their unique situations in a holistic and integrated manner.

## ANNEXES

### Annex 1: Individual Project Case Studies

The Annex combines individual project cases across sectors and regions. The Colombian Ruta del Sol project strengthens the case of road concessions as a dominant model for Latin America. Additionally, this project was one of the early examples of involvement by institutional investors (the national pension plan). The next section drills down to the Bucharest water concession, Romania's first PPP in the sector and also one of the early water sector transactions in Europe. Completed in March 2000, this concession resulted in consumers paying one of the lowest water and sanitation tariffs in Europe. There are cases from lower-income countries as well: Lesotho's main hospital project was the first PPP arrangement in health sector in Africa, and deserves more attention as a potential model for replication. Final section provides analysis of Benin's port of Cotonou transaction, which brought tangible results in terms of government revenue, job creation, improved quality of port services and other spill-over effects for local economy and hinterland countries such as Burkina Faso, Mali, and Niger.

#### A. LESOTHO: National Referral Hospital / HEALTH

58. Lesotho's main hospital, Queen Elizabeth II, is an aging facility that is functioning at a minimal level and urgently needs to be replaced. It is consuming increasing government resources while services continue to decline. Furthermore, Lesotho faces a shortage of trained health care professionals. In 2011 Lesotho replaced its main public hospital with a new 425-bed facility supported by a network of refurbished urban clinics. All the facilities were designed, built, financed, and operated under a PPP arrangement that included clinical services. The new hospital started to deliver greatly improved, high-quality, publicly funded health care services and serve as the main clinical training facility for all health professionals. The PPP project was the first for the health sector in Africa.<sup>17</sup>
59. The Tsepong consortium, headed by Netcare and comprising significant local ownership, won the bid for the project. Under the 18-year PPP agreement Tsepong committed to design, construct, partially finance, and operate the new hospital and three urban clinics. The project was costed at approximately US\$100 million and financed through a combination of commercial financing by the Development Bank of Southern Africa, a government contribution, and private equity. The project was supported by technical assistance funds from the governments of the Netherlands and Sweden and was awarded a grant of US\$6.25 million from the Global Partnership for Output Based Aid.

#### Transaction structure

60. The government wanted a new and affordable hospital, given its budget constraints, but also needed to be sure that the same problems that the existing hospital faced—insufficient staff, maintenance, and supplies—would not be perpetuated. It also wanted the new hospital to have a

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<sup>17</sup> Carla MN Faustino Coelho, Catherine O'Farrell (2011) A Pionerring Health Transaction, Handshake #3, IFC Quarterly Journal on PPPs

lasting effect on local economic development. To address the above, consortia were required to include specific targets for local participation in the project's equity, management, subcontracting, and community development as part of their bids. These targets, along with stated increases over the life of the contract, were incorporated in the final PPP agreement as contractual obligations. Performance monitoring had to be comprehensive and employ a system designed by IFC as an external advisor, that went beyond what most health PPPs would use. Under the contract, performance is monitored quarterly by an independent monitor, jointly appointed by the government and the private operator, and when required standards are not met, predetermined penalties are triggered. Furthermore, the private operator is required to obtain and maintain accreditation from the Council for Health Services Accreditation of Southern Africa. Failure to obtain and maintain this accreditation can result in termination of the agreement. The project also includes the Joint Services Committee, established by the government and the private operator, to review performance and to develop mechanisms, procedures, and protocols aimed at improving services at the hospital and clinics.

#### **Post-tender results**

- Construction started in March 2009, with clinic services scheduled to begin in late 2009, and the new hospital to open in mid-2011.
- 65 percent of the financing by Tsepong was provided through the Development Bank of Southern Africa and equity investors.

#### **B. COLOMBIA: Ruta del Sol / ROADS**

61. Good highway infrastructure is essential to economic development. In July 2010, the Colombian government awarded the concession for the third and final section for the construction and expansion of the \$2.6 billion Ruta del Sol highway. This 1,000-kilometer road connects the capital, Bogotá, with other large urban areas of the country's interior and Caribbean coast. When completed, Ruta del Sol will help foster the country's competitiveness in these sectors and improve road and travel conditions for passengers and goods.
62. Ruta del Sol was initially conceived by the government as a single project. It was later divided into three concessions to adapt to market conditions, to ease its construction and financing, and to mitigate single-operator risk. The winner of Sector 1 will be responsible for building a new 78-kilometer double carriageway road in mountainous terrain and for maintaining it for seven years. The winners of Sectors 2 and 3 will undertake the rehabilitation, expansion to double carriageway, maintenance and operation of 528 and 465 kilometers of existing roads, respectively, for up to 25 years. The project received Project Finance International's Transport Deal of the Year award for the Americas for 2011. The Public-Private Advisory Infrastructure Facility (PPIAF) and the IFC-U.S. Department of the Treasury Trust Fund provided funding for the project.<sup>18</sup>

#### **Background**

63. Like other countries in Latin America, Colombia has been expanding its road network in the last 20 years through different concession models. As a result, a number of projects have been

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<sup>18</sup> Philippe Neves (2012) Steering Colombia's Future. Handshake #7, IFC Quarterly Journal on PPPs and Ruta del Sol, Success Stories, IFC Advisory Services publication

awarded under a broad range of contractual structures. However, many of these projects suffered construction and maintenance delays, leading to contract renegotiations and in some cases early termination. In addition, these projects attracted very limited participation from international investors and local pension funds. This situation led Colombia's National Concessions Institute (INCO) to seek assistance from IFC. Extending more than 1,000 kilometers, Ruta del Sol was one of the most important missing pieces of Colombia's concession program. Following a failed attempt to concession it in the early 1990s, in 2007 Colombia's Ministries of Transport, Finance and Planning jointly requested IFC assistance to structure a new concession for the project and help prepare a bidding and contractual structure that could become a model for future road concessions.

### **Transaction structure**

64. The project was structured in three parts: *Sector 1*: A 78-kilometer double lane greenfield project. The due diligence phase included a deep engineering analysis and an assessment of potential alignments. Given its risk profile, Section 1 was structured as a medium-term concession of seven years with availability payments (five years for construction and two years for operation). The intention is to re-tender it as a toll road concession at a future date. *Sector 2*: This project covers 528 kilometers in flat terrain and revenues include toll collections and government availability payments. This was structured as variable-term concession, so the concession will expire once the concessionaire's requested Net Present Value (NPV) of revenues is reached (maximum term is 25 years). *Sector 3*: This project covers 465 kilometers of semi-flat terrain and revenues include toll collections and government availability payments. This was also structured as variable-term concession limited to a maximum term of 25 years.
65. Government subsidies for all sectors consisted of yearly, project specific budgetary allocations assigned by the Ministry of Finance to each concession. These allocations will be transferred every year to individual concession trusts and funds would be payable to the concessionaires upon completion of contractually defined construction milestones. Deductions could be applied to the payments if the concessionaire does not meet minimum road condition and operational performance parameters. This plan creates an incentive for compliance with construction and operation and maintenance goals. The bidding criteria for all three sectors consisted of a combination of technical and economic variables with the greatest value assigned to the economic proposal. The economic variable was the lowest NPV of revenues.

### **Expected post-tender results**

- Ruta del Sol will reduce travel time, costs, and accidents along Colombia's main road.
- It will link agricultural, industrial, and urban centers with Caribbean ports, fostering the country's competitiveness.
- Ruta del Sol will provide better access and improved services for 10.5 million vehicles.
- Ruta del Sol is a model for future road and other infrastructure concessions in Colombia.
- This project was one of the early cases of involvement by institutional investors from national pension plans.

### **C. ROMANIA: Bucharest Water and Sanitation (RGAB) / WATER**

66. The Bucharest concession was Romania's first PPP in the water and sanitation sector and one of the first such transactions in the sector in Europe. IFC's role in structuring and implementing the transaction provided assurances to international operators and the municipality about this pioneering transaction. The transaction was completed in March 2000. Vivendi of France (now Veolia) won the bid to operate and maintain the water and sanitation system for 25 years. The company has invested more than €70 million in upgrading and servicing the system, resulting in the city's 2.3 million residents paying one of the lowest water and sanitation tariffs in Europe.<sup>19</sup>

#### **Background**

67. The municipality of Bucharest was facing numerous problems in meeting the city's water and sanitation needs. Because of leaks in the distribution network and waste, water losses were very high, nearly 50 percent, which together with an inadequate metering system resulted in low revenues for the municipality. These high losses led to water consumption levels four times the European Union average of 800 liters per person per day. In addition, some larger investments in sewerage, water storage and quality improvements were also required to meet EU standards. Furthermore, the complicated ownership structure of water infrastructure assets resulted in a lack of accountability and disincentives to improve efficiency, while low tariffs did not allow the accumulation of funds to invest in hardware improvement.

#### **External Advisor's Role**

68. The municipality hired IFC as transaction adviser to assess various options for private sector participation and to help structure and implement a transaction for a private partner. The government's objectives were to bring about efficiency gains so that consumer service levels could improve with minimum tariff increases, to transfer most of the investment responsibilities to the private sector and make it as self-sufficient as possible, while also avoiding the dangers of creating a private monopoly. IFC recommended a long-term concession whereby the private operator would be responsible for managing water and sanitation services and for all capital investments. The municipality would, however, retain ownership of the assets. After the municipal council approved this approach, IFC performed the following:

- launched a promotion campaign to attract major international water and sanitation companies,
- conducted a prequalification process to ensure that potential bidders had the requisite technical experience and financial strength,
- drafted a detailed concession contract that included a process and methodology for adjusting tariffs and performance targets for service quality and expansion.

#### **Transaction structure**

69. Under the structure adopted by the municipality, a joint venture concessionaire company was established to manage all water and sanitation services in metropolitan Bucharest under a 25-year concession contract. An international private operator took 80 percent of the shares of the concession company, while the municipality retained 20 percent. Because of the differences in costs and investment needs in various parts of the water and sanitation system, IFC helped structure time-based performance targets for improvements to service quality and delivery.

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<sup>19</sup> Bucharest Water and Sanitation (2012), Handshake #1, IFC Quarterly Journal on PPPs



Obligations of the concessionaire were clearly defined in the concession contract. The concessionaire was responsible for all operations and investments. Service level targets were set across all categories with penalties for noncompliance. The tariff structure and adjustment process were also set out in the contract. The lowest average tariff based on 7 future bid tariffs formed the bid criterion. A tariff review was scheduled every 5, 10 and 15 years with readjustment in the event of project returns being above or beyond a predefined band. This band provided an additional incentive for the concessionaire to be efficient.

### **Post-tender results**

70. The concessionaire, APA Nova, has performed well financially, reporting net profits of €24 million in 2006 (on revenues of €100 million). The company:

- invested approximately €70 million in modernizing water and sanitation services between 2002 and 2006;
- built a new water treatment plant, completed in 2006, to reduce dependence on two older plants;
- reduced water losses by 44 percent from 2002 to 2006;
- introduced a new metering system and reduced leakages, leading to a 50% drop in total water demand from 600 million cubic meters in 2002 to 300 cubic meters in 2006;
- improved customer satisfaction from 46 percent in 2002 to 67 percent in 2006 by means of an effective customer service and relations strategy.

## **D. BENIN: Port of Cotonou / PORTS**

71. Benin's port of Cotonou is a potential gateway to landlocked West African countries, but high shipping costs, low efficiency, and poor logistical facilities have kept it from becoming a key trade route. As part of a major port sector reform program, the government hired IFC as the lead advisor on a PPP for a new container terminal. The concession agreement was signed in September 2009.
72. Groupement Bolloré, composed of Bolloré of France and the Société de Manutention du Terminal à Conteneurs de Cotonou, won the bid for a 25-year concession to build and operate the South Wharf Container Terminal. The winning proposal included a commitment to pay \$200 million in concession fees during the first eight years of operation and invest \$256 million in operating equipment and civil works over the life of the agreement. The project is also expected to create more than 450 jobs. The advisory work was supported by DevCo, a multi-donor program affiliated with the Private Infrastructure Development Group. DevCo is funded by the UK's Department for International Development, the Dutch Ministry of Foreign Affairs, the Swedish International Development Agency, and the Austrian Development Agency.<sup>20</sup>

### **Background**

73. The port of Cotonou faces major development constraints that affect its competitiveness as a springboard to hinterland countries such as Burkina Faso, Mali, and Niger. The government recognized that an efficient port is a driver of GDP growth, but lacked the resources to support Cotonou's rehabilitation and modernization. In 2006, Benin was declared eligible for US\$307 million in assistance from the US Millennium Challenge Corporation, of which US\$169 were for port infrastructure improvements. However, the concession of a new container terminal to a private operator was required to validate the grant.
74. Despite several attempts to engage the private sector in revitalizing Cotonou, the Government had not been successful in improving the performance of the port. In November 2008, the Government engaged IFC as the lead advisor on the structuring, tendering, and implementation of a PPP for the 540,000 TEU1 South Wharf Container Terminal. The government saw IFC's global reputation as reinforcing the credibility of ongoing port reform efforts and attracting internationally reputable investors and operators. IFC's mandate included helping to select, through a transparent competitive process, a private operator to develop and operate the new terminal. IFC provided strategic recommendations on an appropriate institutional framework, the range of activities to be transferred to the private sector, and a tender and regulatory framework.

### **Transaction structure**

75. The project was based on a 25-year concession agreement to invest in and manage the South Wharf Container Terminal. The concession specified a completion date for wharf construction and outlined a termination procedure (if the construction is not completed 34 months after the signing, the concessionaire can terminate the agreement and be reimbursed for the entry fee paid at the signing). The agreement also spelled out the concessionaire's responsibility to pay the Port Authority a fixed fee when the wharf is delivered and to begin terminal operations 12 months after delivery. In addition to the private operator, parties to the agreement would include the

<sup>20</sup> Port of Cotonou, Success Stories, IFC Advisory Services publication

government (represented by four Ministries: State; Justice, Legislation, and Human Rights; Economy and Finance; and Maritime Affairs) and the Port Authority. The agreement was structured to balance risk, protect the rights of all parties, and provide measurable investment and performance objectives.

**Expected post-tender results**

- Yield US\$200-300 million in fiscal impact.
- Leverage US\$256 million in private investments in operating equipment and civil works.
- Create more than 450 jobs.
- Reduce transportation costs and make Cotonou competitive with larger ports within the region.
- Double container traffic in the first eight years of operation, from 300,000 TEUs to more than 723,000 TEUs.
- Expand the export corridor for hinterland countries such as Burkina Faso, Mali, and Niger.
- Increase opportunities to develop external markets for the agriculture and fishing industries.

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