Public-Private Partnerships in Europe and Central Asia
Designing Crisis-Resilient Strategies and Bankable Projects

by Vickram Cuttaree and Cledan Mandri-Perrott

THE WORLD BANK
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THE WORLD BANK
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ABBREVIATIONS

ADB  Asian Development Bank
BOT  Build Operate Transfer
CEE  Central and Eastern Europe
CREMA  Contrato de Recuperación y Mantenimiento, or Contract for Rehabilitation and Maintenance
DBFO  Design Build Finance Operate
DBF  Design Build Finance
DSGR  Debt Service Coverage Ratio
EBRD  European Bank for Reconstruction and Development
EC  European Commission
ECA  Europe and Central Asia Region of the World Bank
EIB  European Investment Bank
EU  European Union
FYR  Former Yugoslav Republic
GDP  Gross Domestic Product
IBRD  International Bank for Reconstruction and Development, World Bank Group
IFC  International Finance Corporation
IFI  International Financial Institution
IMF  International Monetary Fund
JASPER  Joint Assistance for Preparing Projects in European Region
MIGA  Multilateral Investment Guarantee Agency
NPV  Net Present Value
PPIAF  Public Private Infrastructure Advisory Facility
PPP  Public-Private Partnership
SEE  South East Europe
SPV  Special Purpose Vehicle
TEN  Trans European Network
UNECE  United Nations Economic Commission for Europe
VEB  Russian Development Bank
VfM  Value for Money
WBG  World Bank Group
EXECUTIVE SUMMARY

The global financial crisis that began in late 2008 set back ambitious infrastructure development plans among many countries in the Europe and Central Asia (ECA) Region. Many such plans relied on Public-Private Partnerships (PPP) arrangements. Furthermore, the financial crisis resulted in sharp declines in gross domestic product (GDP) and country’s deteriorating fiscal space restricted the scope for maintaining the level of investment or introducing counter-cyclical measures driven by public sector investment in infrastructure. Soaring levels of public debt, limited room to cut expenditures, and lower tax receipts due to slower than expected economic growth will mean that the “fiscal space” in the region to make public investments in infrastructure will be strained in the coming years. The ability of many ECA country governments to expand expenditure any further, even for productive investments in infrastructure, will thus prove challenging.

Nevertheless, in 2010 the City of St Petersburg reached financial close for a 30-year concession contract for the rehabilitation, expansion and management of St. Petersburg’s Pulkovo International Airport – one of the largest airports in the Russian Federation, handling over 6.1 million passengers per year. This was one of the first concession projects in Russia reaching financial close in the context of the global financial crisis. It is also a sub-national PPP project over Euro 1.2 billion prepared by a city with no previous experience in PPP and constitutes the culmination of efforts by the Russian Federation since 2005 to leverage private investment in infrastructure through PPP arrangements. Despite this success, the PPP project pipeline in Russia was far more ambitious and included multi-billion projects in St Petersburg (Pulkovo Airport, Western High-Speed Diameter, Orlovski Tunnel, Nadzemny Express Light Rail); and at the Federal level (Moscow-Minsk highway, estimated to cost RUR 11 billion; and a 43 km section of the Moscow-St Petersburg highway, for RUR 39 billion). Pulkovo airport and Moscow-St Petersburg highway reached financial close in 2010, but Moscow-St Petersburg required State guarantees for a bond issue by a Special Purpose Vehicle set up for the project. Several other projects in advanced stages of procurement have encountered difficulties and are delayed or have been restructured.

Pulkovo Airport exemplifies a successful PPP project that did not require federal government support to lenders. Several factors contributed to this success. First as opposed to most other PPP projects in the transport sector in Russia, the Pulkovo Airport project is an existing airport with an established and increasing traffic. Revenues are also in foreign currency, which reduces foreign exchange risk for investors. Investment in the airport will be done in a phased way, with clear indicators established to trigger the additional construction. Finally, the Russian Development Bank (VEB) played a strategic role, together with key International Financial Institutions (IFC and EBRD) in helping the project reach financial close.

Conversely, the situation of PPP projects in Romania shows the impact of the financial crisis on PPP development. The Comarnic-Brasov Highway is one of the three road PPP projects in Romania to be suspended or restructured and the country has yet to reach financial close on a highway PPP project. The other two projects are the Pitesti-Sibiu motorway (120 km) and Bucharest’s orbital road (201 km).
The three projects, worth €4 billion have all been frozen or cancelled at various stages of preparation and bidding. Although the Comarnic-Brasov highway PPP concession agreement (estimated at €1.9 billion for 55 km) was signed in January 2010, the contract was cancelled in April 2010. Reasons for the failure of the Comarnic-Brasoc project were cited by the parties involved, and include: (i) inability of the concessionaire to reach financial close; (ii) Government did not agree to the concessionaire’s request to change several contract clauses and increase Government contributions; and (iii) the use of competitive dialogue was considered inappropriate for these projects and may have contributed to higher costs than initially envisaged. In addition, industry participants refer to the project as being too big, raising concern about the capacity of Government to make important payments over the life of the concession.

These examples illustrate how in St Petersburg the crisis contributed to the City and the private sector developing a more robust PPP project that involved the rehabilitation of an existing asset with established demand. On the other hand, the Romania examples show how projects with large capital requirements with unknown demand risk were deemed simply too risky for the private sector, especially in the context of reduced liquidity from the financial crisis, which has led to a flight to quality by investors and concerns about affordability for Governments.

The examples also show that the crisis has led private investors to become more discriminating, a development similar to what was observed in the bond market, showing that a “common sense” approach applies even more than before the crisis. Governments have also seen their capacity to finance infrastructure and PPP diminished through the decrease in their GDP and fiscal space available for investment.

This report provides an overview of PPP projects in Europe and Central Asia (ECA) and an assessment of the current PPP market. The key findings of this report include:

Private investors now seek to reduce their risk. The flight to quality projects and countries perceived as less risky is notable. Countries with resilient financial sectors, or those with dedicated measures to help projects reach financial close; including countries with well-established institutional, regulatory, and financial frameworks are preferred by developers.

Achieving financial close is now more complex and time consuming. Across the ECA Region, each project structure exhibits unique risks, but since the crisis, increased complexity and longer times between contract signature and financial close are common.

Private investors now expect more government support, investment and guarantees. In addition to looking for smaller projects with lower risks, developers now expect governments to bring more to the bargaining table—capital grants, guarantees, or other support measures.

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1This study defines the ECA region as Central and Eastern Europe (CEE), South Eastern Europe (SEE), the South Caucasus, Central Asia, the Russian Federation, and Turkey; CEE countries are Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovenia, and Slovakia; SEE countries are Albania, Bosnia & Herzegovina, Bulgaria, Croatia, Kosovo, FYR Macedonia, Montenegro, Romania, and Serbia; South Caucasus comprises Georgia, Armenia, and Azerbaijan. Finally, Central Asia is defined as Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan.
**PPP should no longer be considered as an off-balance sheet budgeting approach.** Before the financial crisis, the main PPP rationale in many ECA countries was to move project finance debt “off-the-books” so as to comply with EU guidelines on government borrowing. This type of accounting created latent fiscal risks and undermined value-for-money considerations of PPP project viability.

**Despite the challenges, PPPs show signs of early recovery.** Following an initial sharp decline, PPP investment globally and in the ECA Region in particular is beginning to experience a resurgence, perhaps because it never suffered the precipitous drop of the 1990s Asian crisis. Instead, ECA countries have maintained pipelines of infrastructure projects in pre-approval, tender, and financing phases but several countries still struggle to reach financial close.

The study also analyses the impact of the crisis on PPP infrastructure projects across ECA. It contains many examples of PPPs, in ECA as well as best practice examples from outside the region. The study shows that PPP projects have increased substantially over the last ten years. Even though there are notable differences between countries (and sectors), PPPs have held up reasonably well during the crisis.

Against this backdrop, there is still significant scope for further use of PPPs in ECA. This study provides suggestions on how to bring this about, and help governments design and select sustainable PPP strategies and projects now that the global financial and economic crisis has affected traditional forms of PPP programs across the region. Despite the changed circumstances, trends and innovations have surfaced in several countries, providing strong evidence of the continuing viability of PPP as an infrastructure investment solution.

The recommendations have been grouped into three main streams which should be considered:

1. **Policy Choices:** PPPs are still a viable option if the underlying investments are fully justified. Even if they cannot be considered by governments as ‘off-balance sheet’ structures, the policy choice of combining public and private resources through a PPP arrangement can still bring about significant benefits. Governments must recognize that infrastructure funding will still remain a mix of public and private resources and effective use of scarce public funds is critical to ensure PPP viability. The accompanying policy for PPPs is more important than ever: institutional and regulatory frameworks must be adequate to manage the PPP arrangements given their long term nature and the need to adapt to changes through the life of a PPP project.

2. **Strategic design of PPPs:** Governments must revise their traditional PPP strategies to align with new circumstances and as appropriate reprioritize PPP projects based on (a) the level of support required and their potential economic

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*The study does not cover how the crisis has affected demand for infrastructure assets or services; neither does it aim to guide countries in their overall infrastructure investment strategy during the crisis.*
and social impacts; and (b) the project’s long term effect on government’s ability to provide financial contributions and guarantees. As appropriate, countries may consider establishing financial support mechanisms in support of PPPs. In some instances, smaller projects and larger government contributions may require amendments to procurement PPP/concession laws, or even new legislation. Strategies for PPP design should demonstrate a thorough understanding of PPP benefits and risks, and for the private sector, identify a realistic role in financing and delivering infrastructure services.

3. Implementation of PPPs: Based on the analysis of past projects and bringing best practice not only from the ECA region but worldwide, this study provides a series of recommendations on project design, level of financial support from governments, risk allocation and management, and the institutional and procurement issues that are likely to increase the success of a PPP structure.

Implementing PPPs: combining best practice with innovative solutions

In designing innovative solutions for implementing PPP, countries should consider the following five broad categories, while accommodating overall strategy and associated costs.

Project Design

Projects must first fulfill government objectives and demonstrate value for money. Project selection must ensure that all potential PPP project benefits are specific and quantifiable. The project preparation process must include built-in mechanisms to solicit expert advice and consult potential markets, for example by including specific requirements in laws governing PPPs, or by establishing a project development facility to promote good project preparation practices.

The priority should be to identify projects that fulfill minimum bankability requirements. Projects that generate revenue in foreign currencies are generally considered more attractive than projects with local currency revenues. Brownfield projects, require limited investment and offer established demand and are therefore more bankable than a greenfield/new build, operate, transfer (BOT). Project preparation complexity may also influence project selection. Strategic projects that are unattractive to the private sector may be good candidates for public procurement.

Financial Support

Project preparation should specify maximum government financial contributions, even more so in the context of limited fiscal space. Financial analysis should assess project funding requirements, specifically government implicit or explicit guarantees. Consultation between line ministries and the Ministry of Finance is essential throughout project preparation and procurement. Contingent liabilities associated with guarantees should be priced in “value-for-money” analysis and be accounted for within government financial and budget reports.
Public guarantees of private loans may be required now to improve bankability and reduce cost of debt for private concessionaires. Lenders may not finance a project without sovereign or municipal guarantees. However, providing too much public support and or guarantees should be done carefully to ensure that the PPP retains adequate risk transfer and incentives to the private sector.

Government must still ensure PPP financial equilibrium and adequate project-level support mechanisms. Government may choose to support project revenue streams, in particular where tariff increases are politically unfeasible or unaffordable. Government funding can mitigate higher tariff impacts under affordability constraints by using mechanisms such as specific subsidies payable against pre-specified conditions, including output-based aid, to support revenue shortfalls.

Risk Management

Government may have to provide more guarantees to support infrastructure investments and assume some developer risks. Government support instruments, such as guarantees, should increase private sector incentives to improve performance. In several cases, lenders have requested Government guarantees for the debt servicing even in the case of poor performance of the operator under an availability payment mechanism. Care should be taken to assess and minimize such liabilities falling on the Government.

Government should incorporate PPP contract variation mechanisms to minimize viability risk. Given PPP projects have a lifespan of 20–30 years, it is impossible to predict all changes. Therefore, governments should establish mechanisms for contract adaptation over the project lifespan to increase long-term viability, and reduce the need for government or third-party intervention. This lowers investor risk and therefore should lower prices as well.

Government should ensure the recapture of additional support to a PPP, or future capture of excessive benefits. Since market conditions and project credit profile fluctuate over time, favorable changes in project circumstances may allow for “value capture” through changes in the project capital or debt structure. This becomes more important given that several projects at an advanced stage of procurement may require additional support to reach financial close.
Institutional

**Even in the context of limited resources, Governments should still ensure a strong project team and adequate resources for reputable advisers.** Risk-averse investors recognize quality. Now that resources are limited, governments must resist the temptation of skimping on PPP project preparation costs. Low-quality project preparation is a false economy that may deter bids and diminish the Government’s credibility in the market.

**Specialist institutions or agencies can be established to support PPPs.** A PPP unit can help address capacity constraints within Government and contribute to quality control. If well designed, special instruments such as guarantees or infrastructure funds can mitigate PPP project sectoral and contractual risks, and provide a platform to assess project pipelines, project viability, and level of government support required.

Procurement

**Open, transparent, and fair procurement systems with adequate market consultation and testing reduce perceived market risks.** Market testing is a continuous process involving consultations with project sponsors and lenders at the design stage and throughout the bidding process. To ensure fairness and transparency, procurement rules should allow for this.

**Procurement processes should allow for market change prior to financial close.** Bids reflect combined bidder and financing costs. Volatile market conditions prevent committed financial terms at the time of bid submission, so governments should build flexibility into the procurement process to allow for variations in funding terms.

**Ensuring flexibility and committed bids requires innovative solutions.** For example, governments could develop their own financing package to be offered at the bidding stage. Bidders can opt for the government financing strategy or their own if the developer can deliver a financing package at more competitive terms. Alternatively, a funding competition could seek the best available terms from the market after technical bids have been submitted. The strategy must gear incentives toward securing the most suitable financing solution.

**Procurement should be organized with a view to attracting IFIs.** International financial institutions can offer long-term financing and help ensure financial close, and typically, their support must be sought during project feasibility phase or prior to bidding.
Back to basics: adjusting PPP best practice to post-crisis conditions

Even in the context of the global economic crisis, PPP can bring efficiency, innovation, and investment value to infrastructure. However, the decision in ECA countries is often between ‘no project’ or a “PPP project”, given current fiscal constraints and the existing PPP framework.

PPP fundamentals remain valid—strong project preparation, transparent and competitive procurement, and an enabling legal, regulatory, and institutional framework with built-in checks and balances to minimize associated fiscal risks. The direct fiscal impact of PPP must be assessed over the project lifespan and associated contingent liabilities must be managed. Skimping on project preparation time and budget increases perceived risk for the private sector and may deter reputable firms from bidding.

Recent trends emphasize bankability as being central to the project cycle and identification, and flexibility in procurement and bid requirements as essential for enabling the private sector to secure financing while maintaining accountability. Smaller PPP projects increase potential for successful financing arrangements.

Future PPP strategies will include a larger role for International Financial Institutions (IFIs) and the European Union. The IFI lending and guarantee instruments can upgrade PPP project bankability and financial sustainability. The increased complexity of securing financial close means that innovative PPPs will have to tailor existing instruments to country circumstances, thus favoring programmatic approaches over single transactions. The EU regulations will shape the future of PPPs across the ECA Region, especially in relation to: (i) allowing countries to support a concession post-contract award; (ii) accounting for guarantees and other forms of support to PPP projects; and (iii) facilitating the use of EU funds in PPP projects.

This study concluded that PPP financing remains viable and can bring value to the economy, despite the difficulties that faced projects that have been impacted by the 2009–10 crisis. The global financial crisis has created new opportunities for the ECA region to refocus PPP projects on value-for-money and financial sustainability, as the primary drivers for private participation, and using the range of options and innovative approaches discussed above.
1. INTRODUCTION

Context of the Study

This study aims to help governments design sustainable PPP strategies and projects in the context of the changed circumstances brought on by the global financial and economic crisis that began in the fall of 2008. The study analyses the impact and implication of the crisis on Public-Private Partnership (PPP) infrastructure projects across the Europe and Central Asia (ECA) region. In the research undertaken for this study, it appears that most crisis-specific issues are cross-sectoral, therefore requiring cross-sectoral responses. The intended audience for this report includes national government stakeholders involved in infrastructure financing, including Ministries in charge of infrastructure, especially transport, energy, and water; state-owned enterprises with operational responsibilities, such as road directorates; and Ministries of Finance and development banks involved in PPPs.

This report reviewed the region’s experience in PPPs in infrastructure before and during the financial crisis period (from late 2006 to 2010). Since not all ECA countries have had successful or ongoing PPP projects during this time, the report draws on lessons from Brazil, India, Spain, and the United Kingdom, countries with established PPP project pipelines to draw on cross-sectoral lessons. The findings can be used by countries wishing to start or re-start their PPP program following the impact of the recent crisis. However, beyond the crisis and its effects, the report can also guide future development of sustainable and crisis-resilient PPP programs.

Most of the analysis supporting the report recommendations was undertaken for the highway sector and was financed through a grant from the Transport Research Support Program. Initially, the highway sector was the focus of this study but the scope was later widened to include all infrastructure sectors because most issues facing highway PPP projects are common to other sectors requiring a cross-sectoral approach to PPP. Sector-specific strategies for highways have been documented in a recent World Bank study.

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4The study does not cover how the crisis has affected demand for infrastructure assets or services, neither is it meant to guide countries in their overall infrastructure investment strategy in during the crisis.

5Government includes any Ministry or public agency with responsibility for policy formulation, project preparation, or granting contracts. The report distinguishes between lenders and developers, due to different objectives within the concession and licences.

Approach to the Study

Information sources for this study were: (i) a survey carried out on the highway sector; (ii) desk research on projects that reached financial close since end-2008; and (iii) interviews conducted with private sector representatives, including Banks and transaction advisers, and IFIs engaged in the Region.

The survey questionnaire looked at six main issues across Europe and Central Asian countries, including how the crisis affected:

- National roads sector PPPs programs (pipeline and operating);
- National government priorities and support to PPP projects;
- Project financing and risk allocation;
- Legal and regulatory issues;
- Private sector views of market evolution and implications for project selection, design, and procurement;
- Private sector views of long-term investment prospects in the ECA region.

Surveys were received from Croatia, Latvia, Montenegro, Poland, Russian Federation, Slovak Republic, Spain, and Ukraine; respondents included Ministries and government agencies, advisors, and independent consultants. In order to compare ECA with other regions, interviews were conducted with World Bank staff working on Brazil and India. Survey information was supplemented by interviews with representatives from the private sector, IFIs, and World Bank staff. Private sector representatives included investment funds, lenders, transaction advisers, engineering firms and project developers, from firms mainly based in Europe (UK, Netherlands, and Germany) and involved in PPP transactions in the ECA region. Interviews were conducted with eight people with expert knowledge of the transport sector and/or PPP in the ECA region. A list of contacts and the survey are presented in Annex I and IV. The desk review was carried out based on published data on projects and sector position. The review focused on projects that reached financial close in the transport, energy, and water sectors. The objective was to determine if there is a correlation between the projects' design and procurement processes and their attractiveness to the private sector.

Report Structure

The report comprises three main sections. The first section outlines the basic principles in PPP and recent trends in PPP investments. The second section discusses how the global financial crisis has affected PPP investments from the perspectives of the public and private sectors. The third section provides practical recommendations on improving PPP project viability and sustainability during the crisis, including a proposed financial framework and required changes to the institutional framework.

Responses were fewer than anticipated because several countries have postponed their PPP program.
2. BENEFITS AND RISKS OF PPP

This chapter provides background on PPP benefits and risks, as well as the reasons for selecting PPP for investments, and PPP options for government to finance and deliver infrastructure services. It is meant to illustrate good practice in preparing, procuring and monitoring PPP projects. Subsequent chapters explain how such practice has been applied in the region and the changes that may be needed moving forward.

Policy: What Are Public-Private Partnerships?

The term has been used since the 1990s to describe a form of private sector participation (PSP) in infrastructure financing. Although definitions vary, all are based on the common principle that PPP is a procurement process to provide services or deliver assets through public and private sector cooperation. Forms of PPP include inter alia, concessions, build-operate-transfer (BOT) and its variants, and leases. Best practice PPP aims for an optimum balance of private sector risk and rewards: PPP recognizes that private sector has a higher cost and the private sector needs a return on investment, but this is offset by private sector ability to reduce the overall costs of infrastructure services delivery through higher efficiency and better risk management, for example during construction.

The main benefit of PPP is to provide better value-for-money to public authorities, which means cheaper/better services over the long term. A review of construction projects by the UK National Audit Office has shown that on average PPP arrangements were responsible for only 22 percent of cost overruns for the public sector, as opposed to 73 percent under traditional procurement arrangements. However, this is possible only with an optimal risk allocation between the public and private sector. Some risks, such as construction, can be better managed by the private sector. Traditional procurement often does not transfer such risk to the private sector, which can lead to costs overruns or construction delays. The same applies to operations and maintenance; a well-designed PPP project can ensure that maintenance is done in an optimum way, which extends asset life, reduces overall management costs, and yields more value-for-money for government than traditional projects.

PPP can also attract private sector financing given that investors can recover their investment from user charges. However, investors borrow to invest so they must repay debt and generate a reasonable profit for their equity participation. In practice, revenue sources are often limited to user charges and public sector contribution (financed by taxpayers), which are can be made available whether or not the project is a PPP (tolls can be applied for example to publicly funded highways). When public authorities consider PPP to bridge the infrastructure financing gap, they need to ensure that the PPP option is cheaper in the long-term than traditional procurement and public sector financing.

PPP projects should be based on economic and social impacts, not only financial profitability. A common argument in favor of PPP is that it prevents so-called “white elephant” projects because the private sector will not bid on a PPP project that is not viable. However, the reality is that potential bidders focus on financial viability, not the overall economic impact on society, which is where government selection of PPP projects should begin—on infrastructure built and services delivered. Governments should avoid PPP projects that are financially attractive but lack sufficient overall public benefit, therefore government engagement must first be justified, then a suitable financing option can be identified, which could be PPP.
Strategy: Designing Support Frameworks and Building Capacity

PPP Framework

Successful PPP projects require a clear, broad, and flexible legal environment. Private partners and long-term investors seek the reassurance of a solid legal framework that provides judicial enforcement of contractual rights, clear laws and regulations that assign responsibilities and specify processes for preparing, bidding, and approving projects. Often, sector laws need updating and sometimes a regional framework can complement national legislation.

Figure 2-2: Traditional PPP Framework

Responses were fewer than anticipated because several countries have postponed their PPP program.
**Consistent policies can attract private partners and decrease public sector costs.** All PPP projects are affected by sectoral policies; for example, setting tariffs, or deciding to build a road could either improve or impair PPP project financial viability. Such risk is reduced if government can demonstrate to the private sector that such policy decisions are made after careful assessment of their impacts on all players. Therefore, sectoral policy should consider existing private operators by compensating for the impact of policy decisions on a PPP project.

**Create a central PPP project coordination unit can address specific institutional issues.** Since PPP projects require extensive coordination, checks, and balances, and technical support to line committees and public entities, several countries in the region have set-up a central PPP unit. The responsibilities of such unit vary but can include: (i) providing information and guidance on PPP to government department/committees; (ii) ensuring the PPP program is integrated with overall planning systems; (iii) providing centralized PPP training, promotion, and advocacy, and a contact focal point for investors and government agencies; and (iv) providing PPP regulatory oversight. However, PPP units justify the investment in time and resources only if a sizeable program exists or is anticipated. Finally, successful PPP units must have strong political support and less effective governments tend to have less effective PPP units.

**Strong Institutional Capacity in PPP**

**Institutional capacity is critical for successful PPP.** Experience shows that the public sector typically lacks skills to prepare, procure, and monitor PPP projects. For example, Chile and South Africa had positive PPP experiences and both had allocated significant resources and invested in institutional strengthening. Even very skilled external advisors cannot replace the need for a strong public sector to lead and manage the process. This requires recruiting an experienced project manager and providing training for public sector staff early in the process.

**Developing public communication capacity is essential to support a communications strategy and to promote public awareness.** The PPP concept is complex and often the public and public servants have misconceptions about asset ownership, tariff policy, or even the potential for private investment. Public acceptance can be improved with a well-designed communication strategy and transparency in the decisionmaking process, selection of preferred bidders, and public disclosure of the PPP agreement, using various media. Government officials may also harbor false preconceived notions about PPP benefits and risks, so there is value in organizing seminars to ensure that a broad audience fully understands the concept and government objectives in pursuing it.

**Sustainable PPPs involve adequate risk allocation.** Typically, risk is defined as uncertainty, or perceived uncertainty. A PPP scheme should optimize risk between the public and private sector by allocating them to the party best able to manage them. Accordingly, the government or granting agency may seek to reduce investor risks as a tactic to attract more private capital at lower cost. Some risks raise concerns among potential private sector investors; risk appreciation varies among PPP partners. In general, key PPP project risk categories are political, breach of contract by government entity, market risk, and default risk.
3. OVERVIEW OF RECENT TRENDS IN PPP INVESTMENT

Global Trends in PPP Investment in Infrastructure

The following overview is based on data available from the World Bank PPI Database. The available information provides a general idea of how PPP investment has recently evolved compared to the mid-90s, although it must be viewed with caution because the figures for investments represent commitments at financial close, not completed investments.

Although the crisis became global in the second half of 2008, PPP investment to developing countries did not suffer as much as during 1997-98. The crisis should not hide the strong growth in PPP investment since 2004. During 2004-08, PPP investment increased by 308 percent, compared to an increase of 361 percent from 1994-97, during the Asian crisis. Moreover, PPP decline during 2008 is tiny compared to the 1998 decline. However, when 2009 data PPP become available, the impact of the financial crisis may in fact be larger.

Figure 3-1: Global PPP Investment

Sources: World Bank and PPIAF, PPI Project Database (2008).
During 1997-08, PPP activity became less concentrated in Latin America and East Asia. In terms of investment growth, a parallel exists with the pre-1998 period. Since 2004, PPP soared in ECA and South Asia to reach a combined share of 47 percent of total investment during 2006-08. By 2008, the average PPP project had reached US$367 million, up from US$250 million in 1997; and PPP is now more diversified across sectors and includes more projects in water and sanitation.

Since 2004, PPP investment has increased more in transport than in other sectors. In 2008, PPP investment was US$24.9 billion, more than 146 percent higher than the previous peak in 1997, and 384 percent higher than in 2004. The 2008 level declined by only 8.0 percent over that of 2007, suggesting that the transport sector may not have been severely impacted by the financial crisis. However, it should be noted that given the size of many PPP projects in transport, a couple of projects reaching financing close may have a high impact on the overall figures. During 2004-06, most PPP growth occurred in Latin America and South Asia; increases were mainly in highway sector investments, and higher numbers of projects.

Figure 3-2: Global PPP Investment in Transport

Sources: World Bank and PPIAF, PPI Project Database (2009).

* By contrast, in 2008, East Asia represented only 18 percent of total investment, up from 11 percent in 1998.
Since 2004, ECA transport investment has grown but remains lower than other regions. During 2004-08, PPP transport investments totaled US$13.9 billion, or about 83 percent of total investment in ECA transport since 1994. During the 1990s, PPP investment in ECA was limited, but in 2004, investment soared, primarily in highways, and more recently, airports. However during 2006-08, investment in ECA transport was only 11 percent of total PPP investment, compared to 24 percent for South Asia and 34 percent for Latin America.

Across sectors, highways appear more sensitive to economic fluctuations. During 2004-06, the number of PPP highway projects rose by 356 percent, and earlier, during 1995-97, by 290 percent, while PPP in other sectors increased much less during 2004-07. However, the number of projects that reached financial close plummeted after the financial crisis began. During 2006-08, PPP highway projects dropped from 64 to 25, a 61 percent decline.
PPP Situation in Europe and Central Asia

Pre-Crisis Situation and Immediate Impact

During 2008, ECA managed to maintain overall levels of PPP investment, despite the crisis. During 2007-08, investment increased by 7.0 percent, and during 2005-08, investment levels were higher than any four-year period in ECA history. These trends contributed to the pre-crisis view in the region that PPP was a good option for much-needed investment, and since 2004, the average project size has been steadily increasing, resulting in an average project size of US$9.2 billion during 2004-07 compared to US$1.95 billion during 2001-04. This trend aligns with that of the highway sector—more big projects were prepared as PPP projects.

Since 2006, the energy sector drove most PPP investment increases. During 2006-08, the energy sector contributed about 56 percent to PPP investment increases compared to 40 percent for transport. The investment levels in water and sanitation were marginal, a trend echoed in other regions, and the number of projects increased from 56 in 2006 to 65 in 2008. This contrasts with Latin America which had more investment in transport; and the Middle-East and North Africa, which had a higher share of investment in water and sanitation.


12Note: the PPI database includes only projects that reached financial closure.
1329 percent when telecom sector is added in the total.
1421 percent when telecom sector is added in the total.
Transport

Most transport investment in ECA has been in smaller airport projects. Airport investments led with about US$8.1 billion committed during 2003-08 for about 20 airport projects, compared to US$2.7 billion for three highway projects. The PPP airport projects average about US$405 million, compared to highway projects at US$900 million; port projects average about US$146 million and railways, US$ 208 million.
Energy and Water

Electricity dominates PPP investment in energy. During 2003-08, PPP investment in electricity was 49 percent of total investment. Since 2006, PPP investments in electricity increased eight-fold, and in natural gas, 23-fold. The Russian Federation privatization program had 59 percent of total investment, and 30 percent of total projects. Bulgaria, Poland, Romania, and Turkey were receiving sizeable shares of investment.
Significant investment in water has not been driven by private investors. Since the late 1990s, the water sector has been particularly hard hit by a combination of factors that has reduced interest from private investors. During the mid-2000s, some high-profile water and wastewater PPP contracts experienced severe problems; regulatory and tariff issues were a common denominator. For example, in Buenos Aires, city and provincial contracts failed, and in Manila, the concession contract had to be renegotiated. Major international private investors backed away from the water and wastewater sector, even before the straitened circumstances of the financial crisis arrived.15

Overall, in the ECA region, PPP structures have been limited in the water sector. During the late 1990s and 2000, major PPP transactions took place—water company privatization in Tallinn, Estonia, and concession contracts in Poland and Hungary. Other private sector involvement has been more conservative, such as management contracts in Tajikistan and Armenia. In Armenia, private sector involvement established the following five independent WSS providers in the sector: Yerevan, Armenia, Lori, Shirak, and Nor-Akung water and sewerage companies. Private sector providers have brought in technical and managerial know-how to optimize sector performance and improve service quality. The Yerevan Water Company has been leased to Veolia Water (France), and Armenia Water and Sewerage Company (AWSC) is operating under a management contract with Saur (France). There are plans to extend such arrangements because private sector financing is unlikely without major public support.

Figure 3-7: PPP Investment in Water and Sanitation in ECA

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15For example, in the mid 2000s, the private French groups of Suez and Vivendi announced that their corporate strategy had changed from an “investment” driven approach to a more progressive risk-transfer approach in which the companies would seek to understand better underground asset condition and therefore investment requirements prior to entering into major financial commitments. Similarly, other major international players such as Thames Water International, which had been purchased by the German energy giant RWE, announced a shift in corporate strategy to divest itself of its international water business in the developing world.
Global Improvement in PPP Activity in 2009

Post-crisis recovery

During early 2009, PPP investment improvements were driven by middle-income countries. During the first three quarters of 2009, PPP investment was higher than in 2008. Four countries accounted for most of total investment: Brazil, India, Russia, and Turkey. In Russia, most PPP projects were divestiture, but in Brazil and India, projects included several highway concessions. During the first semester of 2009, the number of projects reaching financial close was even higher than in 2008, but concentration in a few countries is much higher than before 2008.

Despite an improvement during the first half of the year, PPP investment in 2009 dropped by 40% compared to 2008. In ECA, PPP investment grew during the first half of 2009 compared to the second half of 2008, especially for projects under US$1.0 billion. If projects over US$1.0 billion are excluded, investment levels during the first three quarters of 2009 increased by 36 percent compared to 2008. The ECA recovery was driven mainly by electricity, followed by transport, which had more delayed or restructured projects than the energy sector.

Developing countries attracted private investment by providing additional support to projects. Some governments increased funding or had to pay much more than estimated before receiving bids; some local public banks, including development banks, helped projects reach financial close. Countries such as Brazil, India, and Mexico, attracted significant private investment, in several cases, multilateral and bilateral agencies helped projects reach financial close.

Figure 3-8: Recent Global Trends in PPP Investment

Figure 3-9: Recent Regional Trends in PPP Investment
Developing countries attracted private investment by providing additional support to projects. Some governments increased funding or had to pay much more than estimated before receiving bids; some local public banks, including development banks, helped projects reach financial close. Countries such as Brazil, India, and Mexico, attracted significant private investment, in several cases, multilateral and bilateral agencies helped projects reach financial close.

### Table 3-1: Sources of Funding for Projects Reaching Financial/Contractual Close during January 08-June 09

<table>
<thead>
<tr>
<th>SOURCES OF FUNDING</th>
<th>NUMBER OF PROJECTS</th>
<th>TOTAL INVESTMENT COMMITMENTS IN PROJECTS (US$ MILLION)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilaterals</td>
<td>3</td>
<td>375</td>
</tr>
<tr>
<td>Bilaterals, Commercial Banks</td>
<td>3</td>
<td>4,015</td>
</tr>
<tr>
<td>Bilaterals, Commercial Banks, Multilaterals</td>
<td>4</td>
<td>1,950</td>
</tr>
<tr>
<td>Bilaterals, Multilaterals</td>
<td>3</td>
<td>3,353</td>
</tr>
<tr>
<td>Capital Market (Bonds, IPOs)</td>
<td>1</td>
<td>833</td>
</tr>
<tr>
<td>Capital Market (Bonds, IPOs) Multilaterals</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Commercial Banks</td>
<td>28</td>
<td>8,453</td>
</tr>
<tr>
<td>Commercial Banks, Local Public Banks</td>
<td>30</td>
<td>32,400</td>
</tr>
<tr>
<td>Commercial Banks, Multilaterals</td>
<td>9</td>
<td>5,126</td>
</tr>
<tr>
<td>Local Public Banks</td>
<td>15</td>
<td>5,803</td>
</tr>
<tr>
<td>Local Public Banks, Multilaterals</td>
<td>4</td>
<td>6,625</td>
</tr>
<tr>
<td>Multilaterals</td>
<td>12</td>
<td>2,781</td>
</tr>
<tr>
<td>Not available</td>
<td>192</td>
<td>44,095</td>
</tr>
<tr>
<td>Sponsors</td>
<td>23</td>
<td>6,266</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>328</strong></td>
<td><strong>6,266</strong></td>
</tr>
</tbody>
</table>

Sources: World Bank and PPIAF, Impact of the Crisis on PPP Database.
Recent Developments in ECA Countries
Central Eastern Europe and South East Europe

CEE countries and Croatia had the strongest PPP project experience and pipelines in ECA, however some projects face difficulties in reaching financial close. During 2001-07, 87 percent of PPP transport investment commitment was concentrated in Croatia, Hungary, and Poland, pioneers of the first highway PPP projects during the 1990s. Before the financial crisis, most CEE countries had transport projects in the pipeline; several at an advanced state of procurement, between selecting preferred bidders and financial close. Although CEE countries have been pioneering PPP in the region, results have been mixed for some countries; recent experience reveals difficulties reaching financial close.
The Comarnic-Brasov highway PPP project was estimated at €1.9 billion (including VAT) for 55 km. The PPP agreement was signed January 17, 2010, but the contract was cancelled April 15, 2010.

Reasons for these failures were cited by the parties involved, and include: (i) the concessionaire could not reach financial close, (ii) Government did not agree to the concessionaire’s request to change several contract clauses and increase Government contributions, and (iii) the use of competitive dialogue was considered inappropriate for these projects and may have contributed to higher costs than initially envisaged. Finally, the high cost and use of availability payment may have raised additional concerns about the project affordability and Government capacity to make such high payments over the long-term.

Although it is difficult at this stage to identify the real causes, the difficulty to reach financial close and changes in financial terms after signature of contract is common to several other PPP projects.

Now, many projects in these countries have been suspended or delayed. At end-2008, Latvia’s GDP shrank by 10.5 percent and Standard and Poor, the rating agency, downgraded Latvia’s credit rating to BB+. These changes restricted public spending and curtailed potential PPP projects, including those using availability payments. Hungary decided to cancel, suspend, or postpone most non road sector PPP projects. Latvia restricted PPP projects requiring payments from national or local budgets.

Some CEE countries reached financial close with strong IFI or development bank involvement. Since end-2008, projects reaching financial close remain the exception. In the Slovak Republic, the first road sector PPP reached financial close, and a second project reached commercial close. In Poland, the second part of the A1 highway from Gdansk to Torun reached financial close in July 2009 with support from EIB, SEK (Swedish Development Agency) and the Nordic Investment Bank. In most of these projects, Government increased its share of direct support or guarantees and sometimes allowed increased flexibility in the bid received.
The R1 Highway consists of 57km connecting Nitra and Tekovské Nemce. The €1.13billion motorway contract was awarded to a concessionaire led by Vinci. Financial close in August 2009 was reached with a group of 12 banks and the EBRD. Construction is ongoing.

To reach financial close, the project agreement was adjusted, and Government increased financial support. Government increased its annual availability payments from €109.4million to €127.4million. The agreement included debt term adjustments, with an explicit refinancing option after 5-8 years and refinancing gain shared between Government and the private sector.

Prior to the bid, Government realized that no bank would offer financing guarantees to bidders before the contract was awarded, and wanted to allow leeway for bidders to get an indication of available financing. Therefore, bidders were asked to submit a letter from their supporting banks to indicate expected terms (e.g., margins), and these letters were used as a reference point to negotiate final terms.

**Off-balance-sheet accounting is still driving PPP projects for most CEE countries.** Under Eurostat accounting rules, PPP projects can be off-balance-sheet, which spawned a proliferation of massive infrastructure projects, such as highway project investments of more than US$1 billion. Although EU funds availability can limit PPP potential, several CEE countries still see PPP as part of their strategy to recover from the financial crisis and recent legislation changes have created potential for smaller municipal-level projects. The situation is exacerbated by EU rules that prohibit state funding in PPPs post-award under certain circumstances.

**The SEE pipeline of viable PPP projects is more limited.** The SEE countries’ initial weak performance is explained by conflict in the former Yugoslavia during the 1990s and the relatively smaller size of these economies. The SEE countries are oriented towards EU accession, which may align their legal and institutional frameworks to those of the EU. Their PPP track record is poor so far; in Serbia, only two concessions have been tendered to date: Belgrade Airport Cargo Terminal in 2006; and the Horgos-Pozega Highway in 2008. The Bar-Boljare Highway in Montenegro, an estimated €2.0billion for 182 km, has not yet reached financial close.

**Russian Federation**

*Historically, most PPP experience was limited to divestiture in electricity generation and distribution, with recent post-crisis successes in the transport sector.*

In several instances, divestiture consisted of selling shares that ended up being publicly traded. Recently, an impressive pipeline of multi-billion dollar transport sector PPP projects was developed; St Petersburg was the leading region. Now, the pipeline includes projects in St Petersburg (Pulkovo Airport, Western High-Speed Diameter, Orlovski Tunnel, Nadzemny Express Light Rail); and Federal Highways (Moscow-Minsk, estimated to cost RUR 11 billion; and Moscow-St Petersburg 43km section of highway, for RUR 39 billion). Pulkovo and Moscow-St Petersburg reached financial close in 2010, but Moscow-St Petersburg required State guarantees for a bond issue by a Special Purpose Vehicle set up for the project. However, Pulkovo exemplifies a successful PPP project that did not require massive federal government support to lenders. Several other projects in advanced stages of procurement have encountered difficulties and are delayed or have been restructured.

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*Source: Survey*

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16See Annex II for details.
17The contract was subsequently terminated by the Serbian Government.
The Russian Federation took important steps since 2005 to leverage private investment in infrastructure through Public-Private Partnership (PPP). At the sub-national level, St Petersburg has been championing PPP, with the decision to bid four multi-billion pilot PPP projects.

St. Petersburg's Pulkovo International Airport (“Pulkovo Airport”) is the fourth largest airport in the Russian Federation, having handled some 6.1 million passengers in 2007 and serving more than 137 regular destinations within the Russian Federation and abroad. Pulkovo Airport is expected to handle up to approximately 20 million passengers by 2025 but the current infrastructure and access is inadequate to meet traffic needs and has become a priority project for the region. For this reason, in the summer of 2008, the City launched a PPP project for the management and expansion of Pulkovo Airport. The first phase of this investment program, will amount to some Euro 1 billion, to be financed entirely by the private investor.

The project became effective (responsibility transferred to the concessionaire) early 2010. This would be one of the first concession projects in Russia reaching financial close in the context of the global financial crisis. It is also a sub-national PPP project over US$ 1 billion prepared by a city with no previous experience in PPP. The World Bank acted as strategic adviser to the City on this project, together with international technical, financial and legal advisers.

Several factors contributed to this success. First as opposed to most other PPP projects in the transport sector in Russia, the Pulkovo Airport project is an existing airport with an established and increasing traffic. Revenues are also in foreign currency, which reduces foreign exchange risk for investors. Investment in the airport will be done in a phased way, with clear indicators established to trigger the additional construction. Finally, the Russian Development Bank (VEB) played a strategic role, together with key IFIs (IFC and EBRD) in helping the project reach financial close.

Turkey

Turkey has succeeded with PPPs in energy and transport. Electricity market liberalization supported PPP development in the energy sector; in transport, recent PPP includes the Istanbul Airport expansion with financial close in June 2008, and Antalya Gazipasa Airport concession with financial close in April 2008. Most electricity projects were BOTs for electricity generation. The project pipeline in procurement/negotiations now includes: (i) a €4.2 billion 421km long toll road project (Gebze-Orhangazi-Izmir); (ii) a €1.0 billion underwater road tunnel (5.4 km under the Bosphorus); and the €116 million Kavsakbendi Dam.

Ukraine, South Caucasus and Central Asia

Most Ukraine infrastructure projects are funded by the State or IFIs. Ukraine attracted private sector investment for electricity, but no activity has been reported since 2004. In June 2009, Parliament adopted a new PPP law, and several sectors are identified, mainly transport and construction. Many PPP projects anticipated for 2012 were suspended due to lack of long-term capital, and now are unlikely to be implemented as PPP.

The South Caucasus had some PPP experience, especially in Armenia and Georgia. The Armenia Zvartnots and Shirak airport concessions reached financial close in 2007. The other project is a 30-year Armenian Railway concession, which reached financial close in 2008 and is expected to attract US$570 million. The Armenian water sector has been encouraging private involvement mainly through “low-risk” arrangements such as management contracts and/or lease-type contracts, for which the public sector is still responsible for investment. Most Georgia PPP experience was in the transport sector, mainly airports (Tbilisi and Batumi) and ports (Batumi and Poti). In the water sector, Georgia has recently privatized the water utility for the city of Tbilisi after creating a new water company covering Tbilisi and surrounding areas, but private sector involvement is limited in this type of structure.

Box 3-4: Armenia Water Sector – A Successful Progressive Approach to Use of PPP

Since Armenia gained independence in 1991, water services have deteriorated because water supply and sanitation infrastructure financing has been inadequate for capital investment, or operations and maintenance. But Government developed a progressive approach to attracting private sector participation that included the following components.

1. Establish basic data and develop an initial investment plan with funding from Government, and international and bilateral agencies.
2. Establish clear institutional arrangements for water sector management.
3. Establish the first five-year management contract to cover Yerevan water management (YWSC), serving around one million people.

Under the management contract, water sector management, operational systems, and finances improved, and sufficient data and experience were gained to design an effective lease contract for long-term water sector management and operation. Upon completion of the Yerevan Management Contract, an open tender for a 10-year lease arrangement was concluded; the successful bidder (Veolia, France) contracted to manage, operate, and maintain the utility, and manage the construction program to achieve Government’s capital investment program.

Learning from the successful Yerevan approach, a Management Contract was developed to improve the Armenian Water and Sewerage Company (AWSC) that serves 40 towns and 300 villages outside of Yerevan (a four-year contract with the possibility of a two-year extension).
South Caucasus plans for private participation in the highway sector may not easily attract immediately significant private investment. The Government of Armenia is considering plans for highway sector PPP projects, but these are in early stages of preparation. Georgia considered private participation for the East-West corridor (Tbilisi to the Black Sea) but initially, the concept generated little interest; a smaller scope version is still under consideration.

Central Asian PPP experience was concentrated in Kazakhstan. The country attracted significant electricity and natural gas investment since the mid-1990s. Since 2007, Kazakhstan has broadened PPP experience to transport with a railway concession in 2005, a BOT for Aktau airport in 2007, and a management contract for the Astana Airport. During 2008-09, despite efforts to set-up a PPP unit and develop a pipeline of highway projects, there has been little infrastructure investment. Plans for highway sector PPP projects have been postponed. In 2004, Uzbekistan signed a water sector management contract and in 2008, concluded a partial divestiture of the Uzbek Yolref Transrailway operator. Tajikistan experimented with a management contract for the cities of Bukhara and Samarkand, accompanied by major IFI loan components to support capital investment. Subsequently, the management contractor has experienced difficulties and the contract is not yielding expected results.
Developments in Western Europe and Rest of the World

**Western European investment priorities included infrastructure, especially transport.** France, Portugal, and Spain announced fiscal stimulus packages focusing on infrastructure. In August 2009, the Spanish Ministry of Transport announced intention to tender €6.0 billion in infrastructure projects before end-2009, a 22 percent increase over the first half of 2009. High-speed rail and highways are high priority, part of €4.4 billion for Spain’s rail projects in 2009. Hungary froze PPP investment but maintained part of the highway program.

**Countries maintained their PPP project pipelines using fiscal stimulus and PPP experience.** In most cases, financial close was delayed, but countries maintained an active project pipeline. In the past year, Germany, Hungary, Poland, Portugal, the Slovak Republic, Spain, and the UK managed to reach financial close in highway projects. Publicly available information shows that in EU countries, most projects in the pipeline that are tendering are in the transport sector.

![Figure 3-10: Number of PPP Projects in Tender (Fall 2009)](source)

Note: Other includes accommodation, prisons, education, healthcare, social housing.

Although the rest of the world was affected by the financial crisis, a few countries successfully attracted private financing because of their unique characteristics or specific response to the crisis. For example, India’s domestic financial sector was less affected by the global crisis than other countries, allowing projects to reach financial close.
In Brazil, during 2002–06, there was no private participation in new roads, but in 2007, the country implemented one project and in 2008, eight projects. In 2007, the state of Minas Gerais signed a 25-year concession to operate and expand highway MG-050.1 In 2008, seven of the eight projects reaching closure were 25-year concessions for federal highways in the Mercosul corridor, which connects Brazil’s southern Atlantic coast to Argentina, Paraguay, and Uruguay. These formed part of the second phase of the federal highway concession program; the first phase, in 1995–2000, covered 13,780 kilometers under concessions granted by the federal and state governments.

The seven federal concessions awarded in 2008 were tendered on the basis of the lowest tariff requested and involve 2,600 kilometers and a US$6.4 billion investment to expand and modernize highways. The eighth project, that reached closure in 2008, is a 30-year concession awarded by the state of São Paulo to operate and expand the 32-kilometer Rodoanel Mario Covas Western Beltway, with US$1.6 billion to be invested over the concession period.2 BNDES, the Brazilian development Bank has been playing an important role in helping these projects reach financial close.

In India, private activity in roads rose steadily from 2002 onwards, with annual investment reaching levels of US$3.2–4.8 billion in 2006–08, far higher than earlier years. During 2006–08, India awarded 83 projects for US$12.6 billion and almost 6,100 kilometers. Of these, 74 are concessions, (61 for federal roads; 13 for state roads) for US$11.6 billion, 80 percent of it for federal roads. The other nine projects are build, operate, and transfer (BOT) contracts (two for federal roads and seven for state roads), for 290 kilometers and US$1 billion in investment.

The 2008 Indian projects differ from those implemented during 2006–07. During 2006–07, average investments for the 75 projects (concessions and BOT contracts) was US$100 million, and around 80 percent were tendered using the lowest government contribution (lowest government payments or subsidies) as the main bidding criterion. In 2008, the average investment for the eight projects implemented was US$570 million, and six used highest transfers to the government (highest price paid to or highest percentage of revenue transfer to government) as the main bidding criterion. This suggests that most projects awarded in 2008 were expected to generate sufficient resources to be financially viable, requiring little or no government support.

India’s higher level of activity was facilitated by an amendment to the 1995 National Highways Act that allows private participation in roads and sets out three models for highways: BOT contracts on a toll basis; BOT contracts on an annuity basis; and special-purpose vehicles.3

In Mexico, after a 1996–02 hiatus in new private activity in roads, during 2003–04, the Mexican government began to attract private investment to road projects with the financial closure of three BOT contracts for two federal roads and one state road. Since then, private activity in roads has increased. During 2005–08 Mexico awarded 17 federal road projects (seven concessions and 10 BOT contracts), for US$8.3 billion and 2,040 kilometers. By far the largest was the first highway concession package awarded by Farac (Fondo de Apoyo al Rescate Carretero), a trust fund managing federal highways “rescued” from private concessionaires. This concession package for US$4.2 billion (of which US$4.0 billion is concession fees to government) and 558 kilometers. Besides the federal projects, Mexico awarded three state road projects in 2005–08. These Mexican contracts were implemented under one of three 2003 models: new highway concession, private service contract, and asset utilization.
PART 2
HOW THE CRISIS HAS CHANGED THE PPP MARKET
4. IMPACT OF THE CRISIS ON GOVERNMENT FINANCING

The crisis had multiple effects on government finances. This chapter details the impact of the crisis on government fiscal space, availability and cost of long-term financing, exchange rates among major currencies, and credit ratings, summarized below.

Table 4-1: Summary of Crisis Effects on Government

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
<th>Direct Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal space</td>
<td>Reduced government fiscal space</td>
<td>Limited capacity to fund infrastructure from budget</td>
</tr>
<tr>
<td>Long-term debt</td>
<td>High cost/ low maturity of long-term debt</td>
<td>Terms for sovereign debt increase (when available) and may raise the cost of capital</td>
</tr>
<tr>
<td>Exchange rate</td>
<td>Currency devaluation versus Euro or other major currencies</td>
<td>Higher overall infrastructure costs Reduced profit margin for concessionaire</td>
</tr>
<tr>
<td>Domestic demand</td>
<td>Decline in demand for infrastructure services</td>
<td>If demand is elastic, decrease in revenue if there are user charges. Survey did not raise this as major issue for PPP projects</td>
</tr>
</tbody>
</table>

Economic and Fiscal Impact of the Crisis in ECA

_There are two ways in which ECA countries have been hit harder by the crisis._ First, with the onset of the crisis, fiscal balance deteriorated more in ECA than any other region in the world—during 2005-08, an average surplus of +2.0 percent of GDP deteriorated to -6.0 percent of GDP in 2009 (see Figure 4-1). Second, economic growth rates also declined most sharply in ECA. Prior to the crisis, ECA had the highest growth in the world except for Developing Asia (Asia excluding Japan). While Developing Asia’s growth rate fell from 8.0 to 6.0 percent during the crisis, growth rates in Europe and Central Asia fell from 6.0 percent to -6.0 percent (see Figure 4-2).
The fiscal impact of the crisis varied by country. Across the region, GDP declined sharply, tax receipts fell, and expenditures increased on social safety nets, such as unemployment benefits. Consequently, fiscal balances began to deteriorate region-wide. However, the magnitude of fiscal deterioration began to diverge during the crisis. For example, the EU-10 faced the largest deficits in the region of nearly -10 percent of GDP because of an increase in the ratio of expenditures to falling GDP. In the Western Balkans and Turkey, the average deficit was 7.5 percent because of a fall in the ratio of revenues to GDP. The notable exception was Serbia, where expenditures as a share of GDP fell during the crisis. In energy exporting countries, fiscal deficits averaged 5.0 percent. In Central Asia and the Caucasus, the fiscal deficit was about 7.0 percent of GDP, because the ratio of spending to GDP rose, and the ratio of revenues to GDP fell.

Fiscal responses also began to diverge among ECA countries. Figure 4-3 below illustrates this diversity. Countries that implemented sizeable fiscal stimulus programs had sizeable foreign exchange reserves—such as Azerbaijan, Kazakhstan, and Uzbekistan. Some energy exporters had fiscal deficits up to 6.0 percent of GDP. Other CIS countries carried out modest stimulus programs. South-eastern Europe actually tightened its finances during the crisis. Figure 4-3 also illustrates that automatic stabilizers, such as unemployment insurance, falling tax receipts, and progressive tax systems kicked-in across the region.

Source: Office of the Vice President of the ECA Region, World Bank (2010) – Post-Crisis Strategy for ECA.
Since the crisis, fiscal space in ECA has been extremely constrained, especially for EU countries. Countries such as Turkey and many of the EU-27 countries have very limited fiscal space from which new investments in infrastructure could be financed. The EU-10 and EU-27 countries room for investment spending is particularly constrained because of Maastricht Treaty strict fiscal deficit guidelines. An exception among the EU-27 is Poland where the fiscal situation is less dramatic than its neighbors but still constrained.

Long-term sovereign borrowing became too expensive and maturity is still considered short. During 2009, the spread over U.S. Treasury bonds increased several times and remained even higher in countries such as Ukraine. The interest rate jump reflects market perception of deterioration in several economic indicators, and has curtailed market borrowing to fund infrastructure investment for many ECA countries. Although IFIs, such as the World Bank, provided lower-interest long-term loans, amounts remained small relative to investment needs. As seen in Figure 4-5, interest rates have decreased but maturities over 10 years are still rare in sovereign bonds or debt.
Financial terms have begun to improve but the Greek crisis may reverse that. In April 2010, Russia managed to issue €5.5 billion in bonds (5 and 10 year maturities) with favorable terms (3.7 percent for 5 years and 5.08 percent for 10 years), indicating improved market conditions. However, as shown in Figure 4-5, the market is still volatile and the situation deteriorated following the Greek crisis, which damaged investor confidence in sovereign credit. As a result, sovereign bonds were downgraded for countries such as Greece, Ireland, Portugal, and Spain, increasing their risk premiums and spreads over U.S. treasury bonds.

Developed countries will now have greater difficulty raising long-term debt. Some countries may consider short-term borrowing, for example, by issuing short-term notes with increasing yields. When Greece reached a 731 basis point spread over U.S. treasury bonds, it returned to the financial markets and was planning to issue short-term debt of three-, six-, and 12-month maturities at a premium yield.

Another option for Government borrowing is the local debt market; however, most developing countries lack the necessary local capital market liquidity. One exception is Russia; Government recently revealed plans to borrow around RUB1.5 trillion in 2011, RUB1.3 trillion in 2012, and RUB931 billion in 2013. Most of this borrowing will be from the local debt market; only 3-10 percent will come from foreign sources.
Countries perceived as high-risk are required to offer higher yields to attract investors and raise capital on the financial markets. Figure 4-6 illustrates the difference in yields for two-year government notes between the EU as a whole, Bulgaria and Turkey. Turkish government notes, for example, have recently offered a 750-900 basis point spread over the generic Euro two-year note due to higher investor risk perception.

Figure 4-6: Some Government Bond Yields in ECA

Source: Bloomberg (2010).

Several ECA countries’ currencies depreciated against the Euro. As illustrated in Figure 4-7, the impact of the crisis became more apparent during mid 2008, when many currencies depreciated against Euro. In late 2009, most of these countries showed signs of strengthening currencies, but have been recently characterized with another depreciation trend. This adds complexity to investing in these countries and increases investors’ risk perception because most of the financing for large infrastructure projects would have to be obtained in hard currency (mainly Euro), but often, revenues are in local currencies.
Figure 4-7: Currency Depreciation in Some European Countries

Source: Bloomberg (2010).
5. IMPACT OF THE CRISIS ON PPP PROJECTS

In ECA countries, Governments and the private sector have been directly impacted by the crisis, which has affected PPP projects, including those in the pipeline, and those under construction and operations as shown in Figure 5-1 below.

Figure 5-1: Impact of the Crisis on PPP Projects

Sources: The effects of the financial crisis on public-private partnership (IMF), and authors.
In ECA, the effect of the crisis on PPP projects was most visible during preparation and procurement. During the bidding phase, projects failed to generate interest from the private sector, or failed to reach financial close. Moreover, since the onset of the crisis, projects have suffered delays in preparation and reaching financial close, according to all countries surveyed for this report.

Since the financial crisis, the PPP market has changed in three main areas:

- **Project scope**: restricted financing and increased perception of risk has made the private sector more conservative with regard to project size and PPP type.
- **Funding and financing**: securing financing is now more complex, requiring additional government financial support and guarantees, and reduced potential for PPP project off-balance-sheet PPP arrangements.
- **Commercial and Procurement**: perception of higher risk changes risk allocation between Government and the private sector—not only demand risk but also for other risks that the private sector had been willing to assume. Moreover, procurement process flexibility may need to increase to allow the concessionaire to reach financial close.

Figure 5-2: Changes in PPP Market
Policy: Impact on Public Investment

**Some EU-17 countries announced investment plans as a counter-cyclical measure.** Only a few EU-17 countries have managed to step up infrastructure investment, typically EU-13 countries such as France or Austria. In France, an economic stimulus package of €26 billion includes priority investments in high-speed rail links and university accommodation. In 2009, the Republic of Ireland allocated €7.3 billion for capital projects. In Spain, Government is expected to tender €19 billion for high-speed rail, highway maintenance, and airport improvements.

**Deteriorating fiscal balances in the region have serious implications.** Due to the impact of the financial crisis, the 2010 World Economic Outlook estimates that average growth rates will remain sluggish in ECA during 2010-13. In the same period, public debt ratios across ECA will reach about 40 percent because Government spending (as a share of GDP) has been growing since the crisis, financed from public borrowing. Some countries like Turkey, Poland, and Ukraine already have a public debt to GDP ratio of greater than 40 percent. Soaring levels of public debt, limited room to cut expenditures due to automatic stabilizers, and lower tax receipts because of slower expected growth will mean that ‘fiscal space’ will be limited for public infrastructure investments. Borrowing money on the international financial markets is also expected to be difficult, costly, or both. For example, the credit market analysis firm, CMA, has located eight of the world’s 15 riskiest sovereign debt countries in ECA (CMA Q4 2009).
Public capital investment in ECA has already been affected by the crisis. For example, in Turkey in 2009, capital investment was 10.6 percent of GDP, and in 2008, it was 13.9 percent—a decline of -3.3 percent as a share of GDP. By contrast, Poland’s capital investment was 6.8 percent of GDP in 2009, and 4.9 percent of GDP in 2008—an increase of 1.9 percent.

Only a few countries such as Poland or Lithuania experienced an appreciable increase in capital investment during the crisis, often driven by public investment and EU grants. Most countries experience a decline with sharpest declines in Turkey, Ukraine, and Latvia.

Fiscal space and infrastructure investment decisions have affected PPP programs in ECA. Even PPP projects implemented as concessions require Governments to provide funding through availability payments or capital contributions, which now cannot be guaranteed, given a more limited fiscal envelope. In fact, a few countries have established measures that restrict the use of PPP as an off-balance-sheet financing arrangement. Hungary has cancelled or postponed most PPP projects, except for the highway sector, and was expected to amend the Act on Public Finance to account for total capital value of PPP investment as budget expenditure rather than as off-budget financing. In a few countries, such as Romania, PPP has been declared an anti-crisis program priority.

Latvia’s GDP decreased by 10.5 percent during the final quarter of 2008, a victim of the financial crisis. Government turned to the IMF and the EU for support, and negotiated a package worth €7.5 billion, which was linked to stringent austerity measures, including unpopular public spending cuts. During Q2 of 2009, Latvia GDP was down another 19 percent; S&P downgraded Latvia’s rating to non investment grade BB+ with a negative outlook.

In a July 2009 Letter of Intent sent to the IMF, the Latvian government agreed not to launch any new PPP projects in 2009, with one exception in education. In September 2009, the Cabinet of Ministers issued a decision reflecting this intent because PPP projects would require payments from central and local government budget resources.

Source: European PPP Report 2009 (EPEC).
Government guarantees may not qualify for off-balance-sheet accounting under Eurostat accounting rules. The risk-averse private sector now approaches contract arrangements expecting that higher rates of inflation, foreign exchange and interest will be compensated by more government guarantees or higher levels of guarantees. For example, a section of A2 motorway in Poland that reached financial close in June 2009 had a sovereign guarantee covering debt service and termination costs. PPP projects that transfer construction risk and availability risk to the private sector usually qualify for off-balance-sheet accounting, but respondents were concerned that providing guarantees to lenders may not meet the criteria as the risk is not fully transferred. Such PPP projects could still be accounted for on government balance sheets. Moreover, local and EU competition rules restrict government support for a project after concession award. Respondents from another country reported that developers are encouraging Government to support local banks, to improve their ability to fund PPP projects.

Few projects were restructured to reduce the level of private financing required. Although several countries reported projects over US$500 million and even US$1.0 billion, only a few decided to restructure. Most countries surveyed, including Latvia, Russia, and Spain, said that projects were delayed rather than restructured. Highway restructuring, for example, could bid the section with the highest traffic; or bid fewer lanes for a first phase and add more lanes during a second phase. Montenegro gave bidders the option to bid on a priority section or the total motorway for the Bar-Boljare highway project. It took an extended amount of time for Russia to reach financial close on one of its two major highways, the Moscow-Saint Petersburg and the City of Saint Petersburg decided to restructure the Western High-Speed Diameter into smaller sections.

In general, most countries maintained a pipeline of infrastructure projects in the pre-approval, tender, and financing phase, which confirms that PPP was expected to play an important role when the crisis began. Several projects at pre-approval phase or even in tender phase have been delayed, but the potential investment they represent will have a positive economic impact. Most of the reported pipeline consists of projects in transport and waste management, including at the municipal level.

Figure 5-3: Pipeline of PPP Projects in Some ECA Countries

Privatization has been considered as an additional revenue source. Russia has initiated privatization plans for ports and airports to generate additional finance revenues; this approach has potential if the privatized entity retains sufficient incentives to invest in rehabilitation and expansion.

Box 5-2: Russia’s Privatization Plans in the Transport Sector

In 2010, Russia wants to generate 70 billion rubles (US$2.4 billion), 10 times the original target, by selling all or part of State stakes in 450 enterprises, according to Economy Minister Elvira Nabiullina. Most State sales involve river and sea terminals.

Prime Minister Vladimir Putin wants to use state asset sales to help plug the 2010 budget deficit, which Government estimates at 6.8 percent of output, and use the privatization push to modernize derelict infrastructure. The 2008 slump in oil prices, 54 percent, which pushed the economy into a 10.9 percent contraction in the second quarter, has forced government to renew commitment to renouncing its commodity dependence.
Strategy: Impact on Project Scope and Finance

PPP Projects are now smaller. Limited financing availability hinders private sector efforts to secure sufficient volumes of long-term financing. Also, investors and funding institutions typically have funding limits in any particular market, and since the financial crisis, these limits are significantly lower. Russia is an example of a PPP market with projects that were too many, too large, and too clustered in terms of procurement. Brazil and India exemplify exceptions because the Brazilian Development Bank (BNDES) played a major supporting role, and the Indian financial market was less affected than others. The following figure represents time required to reach project financial close.

Figure 5-4: Time to Reach Financial Close in 2008-09 in EU and ECA (Highways)

Rehabilitation and expansion of existing facilities became the new face of PPP. The new reality is exemplified by Pulkovo airport expansion in St Petersburg, the only project that has reached financial close among the four planned PPP mega projects. Restricted debt availability means smaller investments; smaller investments favor rehabilitation or expansion of existing facilities. Also, more conservative approaches to risk leave investors less willing to accept the untested traffic demand of larger-scale PPP projects. In the current market, bankable projects include (i) highway rehabilitation; (ii) water sector lease or management contract; and (iii) existing major airport expansion.
PPP was initially thought to be a solution to the crisis. A few Governments in ECA wanted to move fast with PPP projects, as part of a counter-cyclical strategy. These countries were often those with more limited experience in PPP and probably unrealistic expectations. PPP is a long-term solution to infrastructure financing needs and requires carefull preparation. The risk is that limited resources may tempt governments to use less expensive, novice transaction advisers, with little PPP experience, but this often results in lower quality documents that fail to meet international standards. Starting the bidding process exposes the project and granting authority to potential bidders; in the ECA region, contracts that are poorly written, ambiguous, or poorly defined are not uncommon, according to bidders surveyed during research for this report, even among countries that have recently joined the EU.

The number of banks involved in reaching financial close increased. An important change was higher number of banks involved in transactions, since lenders are no longer willing to underwrite total project funding. Up to 15 banks can be involved, making it more difficult to reach financial close due. Also, commercial banks have reduced human resources available to appraise PPP projects (due to refocus on other activities); and each bank must undertake due diligence, which causes delays. Some national procurement rules (e.g., Federal Concession law in Russia) limit the time between PPP agreement signing and financial close. As shown in Figure 5-5 below, the number of banks involved increases significantly when the transaction exceeds US$1 billion.

Figure 5-5: Number of Banks Involved in 2008-09 in EU and ECA (Highways)

Source: PFI online (WB calculation) – size of the bubble corresponds to transaction amount.
The need for government financial support to projects increased. Lenders surveyed in the region noted the short-term of available liquidity (often 3-5 years), which is problematic given the long-term requirement of PPP projects. The UK-based lenders mentioned that, even for Russia, which has an investment grade rating (BBB with S&P), it has been unusual to find loans with maturities longer than 6-7 years. A much shorter maturity means higher debt servicing costs, which in the context of a project finance structure means a need for higher revenues (from government or users), as shown in Box 5-3. Equity providers also stated that they are now seeking a higher return on equity (5.0 percent more mentioned by one bank), also creating a need for more revenue. User charges are limited to users’ ability to pay, and this may not be an option, which requires Government to provide the remaining funds.

Box 5-3: Spain and Portugal – A Record of Rapid Financial Closure

Spain and Portugal have an outstanding track record of PPP in highways, and reached rapid financial closure after contract award; typically, in one or two months for Spain. This is attributed to a realistic and structured approach to developing PPP schemes, based on a track record in preparing PPP projects in highways, sector economic stability, and a strong domestic financial sector. In Spain, PPP regulation has been stable, an important contribution to successful of PPPs because it makes contracting procedures faster and cheaper.

Although the current economic crisis has reduced the number of potential PPP awards, rapid financial closure is expected to remain. Government adjusted its approach to terms and conditions that reflect new economic and market constraints. For example, in Spain, schemes coming to award typically have adjusted in the following ways:

- A preference for availability payments over direct tolls (more acceptable with reduced traffic flows).
- Minimum income guarantees are common, requested by commercial banks in particular.
- Higher acceptable levels of return for bidders.
- Refinancing: Potential for refinancing included in contract terms; share of refinancing gain goes to public sector.
- Government seeks to provide other forms of financial support consistent with Eurostat rulings.

It is too early to measure the effect of the Greek debt crisis (2010) but any contagion may influence market perception of Government capacity to make availability payments on these infrastructure projects.
PPP investment funds have been suggested as alternative sources of funding. Most PPP projects were financed from commercial debt, while only a few recent transactions had an increased share of equity. Investors suggested that pension funds could play a role, for example, the Dutch Investment Fund, if such investment makes sense as part of the fund investment strategy. Russia is considering this approach as part of a strategy to issue project-specific bonds that would attract pension funds. Government can facilitate and encourage PPP investment funds.

Figure 5-6: Effect of Shorter Maturity on Government Contribution

Sources: Authors.

Box 5-4: Investment Funds and Other Government - Funded Solutions

UK TIFU
The UK treasury developed a professional lending financing capacity, the Treasury Infrastructure Financing Unit (TIFU), which operates in parallel with commercial lenders and the EIB for PFI projects that fail to source sufficient debt finance on acceptable terms, which is a condition for accessing TIFU funds. Projects must demonstrate that other sources were explored, including project restructuring, changing project scope, providing additional equity, and so forth.

Lending is intended to be an interim and reversible intervention: (i) Treasury envisages selling the loans to the private sector prior to their maturity, when market conditions return; and (ii) it is anticipated that lending will cease when conditions improve and market lending capacity is again adequate to meet PPP market needs.
**In the ECA region, sovereign credit risk concerns heightened during the crisis.** Bidders now expect governments to provide financial support and guarantees over the project lifetime. The switch to availability payments in the highway sector means that governments assume a significant share of total PPP program budget, which is a risk for both governments and bidders. But will central, regional, or municipal governments be able to honor their financial commitments? In August 2007, most CEE countries and several SEE countries were downgraded by credit rating agencies, and only a few ECA countries retain an investment grade rating: Bulgaria, Czech Republic, Croatia, Estonia, Lithuania, Poland, Slovak Republic, and Slovenia.

**Implementation: Impact on Commercial Structure and Procurement**

*The private sector was reluctant to assume demand risk for highway projects.* In the present investment climate, the full toll road model that transfers demand risk to the private sector is no longer viable, even in developed markets such as the UK. This is also the case when minimum revenue guarantees are provided; more bidders now request availability payments. In ECA, highway projects that recently reached financial close, such as the Slovak Republic or Poland, included availability payments, which will influence future PPP project structuring, managing expenditures, and potential for off-balance-sheet accounting for assets.

*Bid submission became more flexible in response to market conditions.* Typically, procurement processes require technical and financial proposal bids to remain valid for six months. Now that the process of reaching financial close is more complex and time-consuming, few bidders are likely to submit a fully committed bid, and even fewer, a bid valid for six months. The new reality is that bids secured in terms of financing are now unlikely, and insisting on fully committed bids may backfire, reducing the number of bidders, and the quality of the offers. In Montenegro, the Bar-Boljare highway project allowed bidders to make a firm or conditional offer at bid stage. Bidders were encouraged to submit a firm offer but could opt for a common financial term sheet that enabled bid comparison. If bidders chose the term sheet, government availability payments would be established at financial close, when exact financing terms are known.

*Imposing tight deadlines on the bidding process backfired.* Bidders need sufficient time to prepare fully compliant bids, particularly now in the face of scarce resources available to prepare proposals. Also, since private funds are unavailable for all projects, and the private sector is more conservative, tight deadlines will yield fewer bids. Contract penalty clauses may have to be relaxed somewhat, without losing their benefits, to provide concessionaires with more room to maneuver. In Hungary, the M6/M60 highway project was cited as an example of unrealistic expectations for the private sector.

Despite the crisis, there is still value in PPP, if the underlying investment is justified, and if the PPP option compares favorably to the alternatives. Today, sustainable PPP programs require changes in design, risk allocation, and procurement. Some of these issues as well as other recommendations are presented in this chapter.
6. RECOMMENDATIONS FOR POST-CRISIS PPP ENVIRONMENT

Policy

Consider PPP if underlying investments are fully justified. For fiscally constrained ECA countries, PPP may still be justified, if the underlying investment generates sufficient benefit, if the project is designed to maximize economic and social benefits, and if alternative financing options are unavailable or more expensive. Especially in the highway sector, this would require a change of approach in the way projects are selected and prepared in several ECA countries.

Use PPP as a short-term crisis solution only if the projects are worthwhile, at an advanced stage of procurement and if fiscal space is adequate. First, the private sector expects a well-prepared project, which requires adequate time and resources, even in the new context of fiscal constraint. Second, private sector capacity to finance projects is limited, especially for projects above US$1.0 billion, such as new highways. Third, PPP projects will require more guarantees, as well as higher levels of guarantees and financial payments over the contract lifetime. Fourth, off-balance-sheet arrangements may not be possible because governments would be required to offer guarantees to lenders in case of concessionaire default.

Account for contingent liabilities of previously off-balance-sheet PPP projects. Some liabilities may not meet the Eurostat criteria for off-balance-sheet budgeting, or new interpretations of accounting rules. The 2009 European PPP Report suggests switching from infrastructure-led PPP to service-led PPP, requiring smaller investments and focusing on value-for-money instead of building assets. Whether budgeting is on- or off-balance-sheet has implications for limiting total government debt burdens to responsible levels. Therefore, it is essential that governments account for PPP project contingent liabilities, regardless of whether the liabilities are on or off government balance sheets.

Prepare projects with a view on bankability. Inadequate feasibility studies can lead to over-dimensional projects, especially in the transport sector. In the face of financing scarcity, projects must be well-dimensional and respond to existing needs. Moreover, bidders and developers now seek reassurance and safer projects, which requires quality project preparation, and thorough feasibility studies, including supporting documents, presentations to potential bidders on traffic forecasting, willingness-to-pay for tariff proposals, and environmental and social planning documents.

Do not overestimate private sector interest. The market is the final judge of bankable projects. The private sector is now more alert to political risk and poor governance, project financial frameworks, and currency risks. This means that Ministries and granting authorities must deal with greater PPP project complexity than before. The diagram below shows seven key factors for effective PPP design, which governments should be able to use for a self-assessment of ‘strong,’ ‘average’ or ‘poor.’ Countries can improve on each dimension, thereby increasing their overall rating, although a high score on
all dimensions is difficult to achieve. Some quantitative values, such as credit rating, may be used to determine the fiscal risk. Other dimensions are more difficult to rate precisely. Before the private sector’s “flight to quality”, countries with poor ratings on some dimensions could still attract private investment for higher premiums, but this is no longer the case.

Figure 6-1: Framework for Assessing Country Risk

Restructure and re prioritize projects in response to greater private sector risk aversion. Many PPP projects with preparations underway have enjoyed substantial political support and upfront investment in preparation. Nevertheless, the private sector is now unwilling to assume the same level of risks, so a good strategy is to consult potential private partners on their preferred sectors and project types. For example, a large new highway with demand risk partly transferred to the private sector would be more difficult to implement as a PPP. Instead, it could be implemented as a rehabilitation project, or as a small highway with availability payment and full demand risk transferred to government. In practice, this means that a large highway project would be more attractive in phases, and an airport with revenue in foreign currency might be more attractive than a highway.
Allow flexibility in the procurement process to reach financial close. Flexibility does not imply bypassing procurement rules to select and negotiate directly with concessionaires, which is non-transparent and prone to corruption and poor outcomes. Instead, Governments should provide sufficient time for bidders to reach financial close, or allow bidders to submit comparable proposals that consider financing uncertainties.

Improve financial frameworks to attract private participation. Countries that managed to attract significant levels of investment in PPP during the last six months had either a resilient financial sector, such as India or Turkey, or had introduced mechanisms that provide direct support to bidders or individual projects. For example, infrastructure funds, such as in the Netherlands, or development banks, such as in Brazil, Russia, and Turkey provided strong support to PPP projects. These mechanisms, which are neither project- nor sector-specific, make more sense when several PPP projects are implemented in the short term. In the longer term, countries should continue efforts to improve their overall credit rating and develop the domestic financial sector to provide long-term financing.

Figure 6-2: Updated Framework for PPP

Source: Authors.
Strategy

Develop a medium-term PPP strategy. A medium-term strategy should specify the scope for private participation and should be communicated to stakeholders to clarify the roles of the public and private sectors in PPP. A PPP strategy establishes credibility for Government and the PPP program, and demonstrates understanding of PPP benefits and risks; for the private sector, a strategy identifies a realistic role in financing and delivering infrastructure services.

Adapt the PPP strategy to the project pipeline and existing fiscal space. Figure 6-3 below proposes a framework to determine a viable PPP strategy, based on present circumstances, in which Governments must have well prepared and bankable projects. A strong pipeline will generate private sector interest; fiscal space is important because even a well-designed PPP project may require significant government support.

Figure 6-3: Framework for PPP Strategy

Source: Authors.
**Limit the size of the PPP program if fiscal space is insufficient.** A strategy of full support to all PPP projects could be possible only in the few countries that have an existing pipeline of bankable PPP projects and sufficient fiscal space to provide greater financial contribution or guarantees. In the new financial climate, projects will need more revenue from users or grant support from government to reach financial close. Governments may have to agree either to increase tolls or tariffs, or contribute more to the project. In addition, projects will require more guarantees designed to be triggered by specific events, and the probability of payment increases with the number of projects reaching financial close, a situation made more precarious by the financial crisis.

**Reprioritize projects in the existing PPP pipeline based on financial needs and fiscal sustainability.** First, countries may benefit from establishing an envelope at the national level for immediate financial support and guarantees for projects. Second, governments need to prioritize projects based on the level of support required and their potential economic and social impacts. Third, the prioritized projects must be assessed in terms of bankability to select those attractive to the private sector, or projects that may generate additional revenue. This approach should allow sustainable support for PPP projects during crisis recovery, and makes sense for countries with limited fiscal space but an existing pipeline of projects able to attract private partners. When Government support to all projects is unsustainable, higher selectivity becomes the new norm.

**Consider restructuring weak PPP projects into public procurement.** Some ECA countries have fiscal space, but their PPP project pipeline is weak and unlikely to attract private investment, except at a prohibitive premium. Project portfolio quality may present a threshold at which projects could be implemented under public procurement. However, this should not prevent countries with fiscal space to also identify projects likely to deliver value-for-money if implemented as PPP.

**Consider management contracts if fiscal space is limited and the project pipeline weak.** Most countries that have a weak PPP pipeline and lack experience in PPP have little chance of attracting private investment in the short term. However, a well-designed and bankable project may attract private investment even if the country has limited experience, or these countries could consider management contracts, a form of private participation that is less complex than a concession, offers the public sector value-for-money, and provides governments with an opportunity to build credibility with the private sector. Under a management contract, the private sector performs a specified function, such as operating public assets, without investment but with performance-based payments from government. Designing and preparing a management contract also requires solid preparation; performance-based contracting can be complex.

**Additional government support should be limited and include options to share benefits.** Despite limited options to fund infrastructure assets, the fiscal impacts of PPP projects must not be underestimated; the longer-term effect of providing financial contributions and guarantees will accumulate and could constrain future spending or threaten fiscal stability. Therefore, the PPP framework must include checks and balances to ensure that projects selected and procured as PPP generate sufficient benefits. First, Governments can limit their financial and guarantee support at the national level; and second, since current market pricing reflects higher interest rates and shorter maturities, Governments should consider a contract clause to encourage refinancing and share benefits if market conditions improve.
Improving the PPP Framework

**Improve flexibility of PPP frameworks.** As discussed above, each country must evaluate fiscal space and the quality of its PPP project pipeline. In addition, it may be necessary to introduce changes into the overall PPP framework to encourage and enhance PPP projects. For example, the procurement process and the length of time to reach financial close may impede overall development of a PPP scheme, but attempting to save time by moving into direct negotiations with a single bidder is usually a worse solution. It usually increases public sector costs, and undermines public trust due to lack of transparency, which has been known to trigger strong public opposition. Instead, the PPP framework needs flexibility to allow private partners to reach financial close if full financing is not yet secured. Flexible options include (i) scoring the level of proposal compliance instead of rejecting it; (ii) using a standard financial term sheet for all bids to rate proposals even if full financing is not achieved.

Figure 6-4: New Framework for PPP

![Figure 6-4: New Framework for PPP](image-url)
Ensure laws and regulations facilitate smaller projects and Government contributions. Although smaller projects are now more likely to be financed, and alternative PPP models, such as lease or management contracts, can improve public sector efficiency and build a PPP track record, these options are not included in the legal/regulatory framework of all countries. Most governments created laws and regulations with big concession contracts in mind, such as building new highways. Some laws forbid Government financial support to any PPP projects that deviate from concession-type PPPs. In addition, procurement process changes may need to be reflected in procurement/PPP/concession laws, or enacting new legislation may be necessary.

Support PPP projects with a new financial framework. A financial framework that leverages public resources can improve a project’s chances of attracting additional private funding. Countries’ financial strategies should be designed to simultaneously support multiple PPP projects, cover all projects and sectors, and establish rules that align with funding available on the market so projects can reach financial close. As government resources are an important part of project support, projects need to be well-identified and prepared to minimize support from the financial framework. Mechanisms to channel resources using the financial framework are discussed in Chapter 7.

Align institutional arrangements with the financial framework. A financial framework to support PPP projects is a useful cross-sectoral instrument to promote and enhance the PPP pipeline. Now, PPP projects require even stronger government appraisal capacity and rapid decision-making, which may exert additional pressure on the Ministry of Finance beyond current budget capacity. In countries with strong institutional capacity, some level of decentralization could improve decision-making through a dedicated investment or guarantee fund. These options could be adopted as temporary measures during the financial crisis, but transparency and good governance remain a priority, and no institution or fund should bypass thorough project appraisal or channel public money to ineligible projects.18

Implementation

**Determine new project selection criteria.** Experience in ECA reveals that the two main criteria for PPP project selection were: (i) being considered high-priority, despite lack of economic analysis; and (ii) potential to minimize budget impact or to be accounted off balance sheet. Feasibility studies were often conducted only to determine if the generated revenues would be sufficient to cover the private investment or availability payments provided by governments. This approach may not work under current market conditions and new project selection criteria may be needed.

**Ensure that projects fulfill government objectives and attract private sector interest.** Projects with revenue in foreign currency, such as airports or electricity generation for export, are more attractive than projects with revenue in local currency and limited flexibility for increases in user fees, such as highways or water supply. A brownfield project with limited investment and established demand is more bankable than a greenfield/BOT project with uncertain demand; for example, rehabilitating an existing highway versus upgrading a road to a six-lane-highway. The complexity of project preparation can also be a criterion for selecting projects. Projects that are strategic but not attractive to the private sector may be good candidates for public procurement.

**Market-test potential projects with the private sector.** After a project is identified, governments should seek feedback from the private sector. Lending institutions must also be consulted because project bankability is directly linked to debt availability. Market testing will help ascertain the types of projects attractive to the private sector and the main risk allocation that would make projects bankable. For governments, project complexity depends on institutional capacity and PPP experience, for example, a highway PPP project is considered less complex to prepare than a railway PPP, which often involves reforms and complex labor issues. The survey confirmed that highway projects with an availability payment structure are more attractive than similar projects requiring the concessionaire to assume traffic risk. Figure 6-5 shows an example of project identification based on project complexity for government and project attractiveness for the private sector.

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19 Some countries reported that an economic analysis was conducted only for projects using EU or IFI support.
Figure 6-5: Framework for Identifying PPP Projects
Does not show actual attractiveness of sectors (illustrative only)

Attractiveness for Private Sector

- **HIGH**
  - IPP in Energy Generation
  - Existing Airport Rehabilitation
  - Rehabilitation of Highway
  - New Highway with AP

- **LOW**
  - New Highway with tolls

- **LOW**

- **HIGH**
  - Ports
  - Urban Transport
  - LRT, Metro
  - Water Concession
  - Complexity for Government

Source: Authors.
Note: Attractiveness is determined on a case-by-case basis.
Does not show actual attractiveness of sectors (illustrative only).
Project Preparation

*Follow good PPP practice during project preparation.* Good practices are documented in numerous reports, and remain valid even under new circumstances, for project preparation, quality cost estimates and demand assessments. Experience in ECA has shown that political commitment to PPPs is strong during the early stage of preparation, which can make it difficult to change project design or revert to public procurement. Despite this, a full and critical assessment of these options is essential in the current financial context because not all projects will prove bankable.

*Define maximum government contributions and guarantees during project preparation.* Financial analysis should examine government contribution (or tariffs to be charged) under existing conditions and the most conservative scenario, and evaluate each one against the envelope for project funding and government implicit or explicit guarantees, to set the maximum level of government support for the project.

*Increase project bankability through realism in project’s specifications.* Investment size is a critical criterion for bankability. Regardless of revenue potential, larger investments are more difficult to finance. Total capital cost depends on several factors, such as service demand, for example, highway traffic volumes, or kWh for electricity generation. Government policy decisions affect project financial sustainability. In the example below, the financial sustainability of a light-rail or metro becomes a function of tariff policy, route alignment (number of km and stations for the line), performance requirements, and other technical specifications—decisions that are under Government control.

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20 Private Participation in the Transport Sector (Cuttaree, Humphreys, Muzirra, Strand), Public and Private Participation in the Water and Wastewater Sector (Mandri-Perrott), and Private Sector Investment in Infrastructure (Delmon).
Hire a solid project team. Before the crisis, it was essential to have reputable advisers with international experience in PPP projects, but now resources for project preparation are limited. Nevertheless, it could be argued that high-quality project preparation is now even more essential because preparing a PPP project ‘on the cheap,’ without using transaction advisers, may result in no bids and damage credibility in the market.

Test the market, including lenders, before moving to bidding. Market testing is not a single event. The views of project sponsors and lenders should be taken into account at the design stage and the consultation process should continue throughout bid design and the bidding process. Procurement rules should include a consultative process to ensure fairness and transparency. Market testing includes the financing mechanism and risk allocation, both of which have changed significantly in the context of the financial crisis, and lenders’ feedback should be taken into consideration before bidding starts to ensure maximum responsiveness.
Procurement and Financial Close

Redesign procurement processes to improve project transparency and sustainability. Since financial commitments at contract closure can be difficult, governments can consult IFIs such as the World Bank or EBRD for help on developing and agreeing on contract amendments acceptable to the market to achieve project bankability. Under traditional project finance structures, bidders would comment on the PPP agreement during the bid process, and would present fully committed technical and financial bids. However, under present circumstances, the likelihood of fully committed bids is low, and lenders have now introduced conditional clauses in their financial term packages, known as ‘market flex.’ Therefore, procurement processes must be adapted to changed market conditions. One approach may include the following:

- Develop the PPP agreement on a consultative basis through multiple iterations, using clearly specified procurement rules at the outset of the bidding process;
- Obtain comments, and as appropriate, buy-in from an IFI, modifying terms and conditions to better suit market requirements;
- Review and assess possible “credit enhancements” that could be offered to the private sector to mitigate specific project, sector, and other country risks;
- Define bidding variables against readily measurable issues, for example, select the preferred bidder on the basis of business plan, construction costs, operational costs, minimum requirement for project sponsor’s equity return, and compliance with technical specifications.

Structure procurement with potential IFI participation in mind. IFIs can provide an important source of long-term financing and play a key role in ensuring financial close. However, these agencies often require projects to demonstrate a positive economic return and follow good practice in procurement and environmental/social safeguards; social requirements for land acquisition and compensation may exceed local legislation. Competitive bidding is often a requirement to secure IFI support. Typically, the decision to involve an IFI takes place during the feasibility phase or just before the bidding phase.

Broaden the mandate of national development banks. Typically, development banks have fewer restrictions than governments on supporting projects after a preferred bidder is selected. In most EU countries, competition policy precludes increasing financial support to a PPP project after the concession agreement is signed, because losing bidders could claim that knowledge of additional support would have helped them make a more competitive offer. Development banks, such as VEB in Russia, can support a PPP project directly on the bidders’ side. Ideally, development banks should offer identical financial terms to all bidders and get involved at early stages of bidding. Development banks can raise funds through capital markets, with full or partial sovereign guarantees, and on-lend proceeds to individual projects.
**Conduct early public-private consultations to improve PPP scheme viability.** There are major advantages to government and grantors to build consultation into the PPP process from the earliest design stage through procurement, contract award, and financial closure. Advantages to government and grantors include: (i) drawing on bidder experience to refine the overall scheme; (ii) increasing bidder awareness of project issues and parameters, which provides an opportunity for realistic risk assessment and can help reduce government bidding and financing costs; and (iii) exposing government to project financing constraints, opinions, and advice on mitigation measures for constraints and difficulties of reaching financial closure.

**Adapt the procurement strategy to bidders’ potential difficulties in securing financing.** Under current conditions, if the preferred bidder is selected by rating quantifiable factors, it is challenging to assign an accurate rating to issues that are not 100 percent certain, such as a full funding package, as part of the bidding competition. One extreme is to disregard the financing package as a bidding variable. Alternatively, a bidder could define a minimum equity return requirement, which could be assigned a rating as a bid variable. Bidders would be required to bid against common ‘pro-forma’ financing costs to compare ‘like-with-like’ bids. Other alternatives include providing a common financial model to bid against, and awarding the project on a technical bid plus a notional bid against the financial model. The bid would be awarded against technical submission and price, and the financial basis could be adjusted at closure against defined market variables.

**Adapt commercial terms to bring in financiers.** When bids are not fully funded, there is no opportunity for negotiations on financing terms between the bidder and its sponsors. Previously, lenders were required to submit financially committed bids, which meant that the deal structure was unlikely to change. If lenders needed more flexibility or assurances than those already incorporated in the bidding process, they would be provided by the sponsors themselves. In contrast, in an unsecured funding bid, negotiations with lenders could change the commercial terms of the proposed PPP after bid award, increasing the risk to Government and raising the PPP risk profile. This situation will require careful management and may require changes to procurement and competition laws or regulations. Therefore, it is increasingly necessary to optimize access to the newly limited banking market—the number of players and the amount of financial resources.

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21 According to the European PPP Expertise Centre, the current universe of active banks is limited to an estimated 8-10 potential lead banks and around 15-20 participants. Accordingly, projects over €500m are likely to be expensive or require substantial public support. This constraint should be considered when designing a global procurement program.
7. MECHANISMS AVAILABLE TO GOVERNMENT TO SUPPORT PPP PROJECTS

This chapter explores linkages between finance, risk management, procurement, and project design. The chapter presents a menu of potential mechanisms available to governments in support of PPP projects. Since needs vary among countries and sectors, solutions must be tailored to individual conditions. Moreover, they should be considered after a PPP strategy is put in place as recommended in previous chapters. Each option is expected to address specific issues, so the selection of these instruments is country specific. Moreover, each of these instruments have financial and fiscal implications that must be weighted before adopting them.

Figure 7-1 provides the main solution clusters; this list is indicative but not exhaustive of the multiple options available to help PPP projects reach financial close and remain financially sustainable.

Figure 7-1: Summary of Supporting Mechanisms to PPP Program

| Project Financing | • Specific Financial Support to Project, e.g., soft loans, tax, OBA  
|                   | • Lending or investing in project  
|                   | • Public Support  
|                   | • IFL support |
| Risk Management   | • Implications of policy on availability and cost of funding  
|                   | • Risk implications of IFLs, bilaterals and other agencies’ support  
|                   | • Specific risk protection instruments eg guarantees, etc |
| Procurement       | • Flexible procurement process  
|                   | • Funding Strategies & funding Competitions  
|                   | • Provisions for refinancing  
|                   | • Use of forced refinancing ie soft and hard ‘mini-perms’ |
| Project Design    | • Implications of use of public funds  
|                   | • Consider phasing or smaller scale  
|                   | • Underwriting specific projects risks  
|                   | • Funding ongoing investment needs |

Source: Authors.
Cluster A: Project Financing

Specific Financial Support to Projects

Few PPI projects are viable without government support—technical or financial. Government support improves financing efficiency of PPI projects: first, government assumes risks that it can manage better than private investors; second, it can supplement projects that are economically but not financially viable. Infrastructure projects with large public externalities may be appropriate for some direct financial support from government; also, local financial markets may be unable to provide financial products for private investment. Sometimes direct government involvement through long-term or fixed-interest debt is crucial to ensure private financial viability. Governments can opt for public loans but it is important to preserve appropriate risk transfer to the concession company.

Public guarantees (sovereign, municipal, etc.) of private loans can help improve project bankability and reduce the cost of debt for private concessionaires. In some cases, lenders may choose not to finance a project if guarantees are not provided, especially if grantor creditworthiness is deemed deficient. However, ‘wrapping’ project debt with the full faith and credit of public institutions requires a measure of caution regarding risk transfer and private incentives. Planners should ensure that public guarantees on senior debt benefit from adequate cushions of equity capital at risk. Contingent liabilities associated with guarantees should also be priced into ‘value-for-money’ analysis and should be transparent through public disclosure.

Contributing public equity capital to PPP concessions may help align public and private interest in financial success. Sharing common equity can introduce a mechanism for public influence on operating and investment activities. Public equity is often “in-kind” through public asset transfers for brownfield concessions, or through capitalization of capital grants. However, public equity ownership drawbacks often outweigh its benefits because this arrangement reduces risk transfer and increases the likelihood of political interference, which can damage PPP operations and undermine private sector performance incentives. Consequently, shareholder agreements must address these issues explicitly. Differences between public and private shareholders can produce conflicting strategies and incompatible objectives.

Governments may cover revenue shortfalls to compensate for the risk of lower demand or higher finance costs. Government can support project revenue streams, in particular if tariff increases are not politically feasible or affordable for users. Government funding can mitigate the impact of higher tariffs if there are affordability constraints. The mechanism for supporting revenue shortfalls may be specified subsidies payable under predefined conditions.

Multilateral and bilateral financial organizations can be catalysts for PPP project financing. If local public resources are lacking, support may be available through multilateral or bilateral development institutions. Historically the World Bank, IFC, ADB, EIB, MIGA and EBRD have been active project financiers. Most of these organizations

22 Government equity contributions could also be considered a major risk of interference by the public sector. Equity contributions should be set within the contractual arrangements so that the private sector maintains full independence in managing daily business operations.
operate exclusively within developing countries. Multilateral and bilateral financial institutions may offer support through loans to projects and governments, grants, equity investments, guarantees on debt and equity and design support for PPP structures through specific advisory services. Multilateral and bilateral support can contribute to more financially viable investments and provide developers and lenders with additional comfort on political and regulatory project risks. However, working with these institutions may also lengthen the project development process, given specific requirements in terms of environmental and social safeguards requirements and stringent procurement procedures.

**Export credit agencies (ECAs) can facilitate foreign investment and support PPP financing strategy.** Although not specific to the crisis, export credit agencies (ECAs) can help develop PPP financing strategies, particularly when local credit markets are underdeveloped or when sovereign risks reduce the attractiveness of private finance. In PPP projects, ECAs have commonly supported financing of imported goods such as transport signaling and communication systems. Some ECAs can provide project financing through banks or directly to the buyer via guarantees to the buyer’s bankers. Some ECA financing can take the form of loan guarantees, political risk insurance, concessionary lending, or working capital guarantees. In some instances, ECAs require matching contributions from private lenders, which may need to be revised in the current context, since most ECAs from OECD countries abide by the “Arrangement on Officially Supported Export Credits,” which sets upper limits on the amount of assistance foreign governments can offer in support of their exports.

**Exemptions from taxes and selected import and customs tariffs can enhance PPP bankability.** Exemptions can enhance the PPP financial package but will typically require legislative acts or close coordination between public agencies. Early planning for exemptions and their associated legal requirements is essential to ensure timely project completion. In addition, public institutions should carefully consider the ‘value-for-money’ associated with long-term tax exemptions, especially on corporate income. During the early years, existing tax codes and accounting practices may already provide large tax shields through depreciation and interest expense deductions. During the later years, providing more tax breaks could reduce incentives for further capital investments and potential public revenues.

**Additional funding may become available from captured externalities.** Transport project benefits often accrue to those who do not directly pay for the services. In highway and other transport projects such as urban light rail systems, revenues and other financial benefits can be derived from sources outside of system operations. For example, property development is an external benefit of transport investments. However, real estate development is not a panacea for transport sector funding challenges and cannot substitute for well-structured projects and sound operations. New project planning should focus on providing high-quality and user-responsive public transportation services.

**Capital grants can provide significant incentives for achieving project bankability.** Typically, upfront capital costs required to construct new transport systems are in the hundreds of millions of dollars. However, subsequent tariff revenues from passenger

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23 From the same example of light rail metro projects is the effective use of so called “air rights,” whereby a developer, through owning or renting land (or a building) gains the right to use and develop the empty space above the property. Building over tracks, platforms, depots or stations is potentially very profitable.
fares or road tolls are often too small to service the costs of project construction debt. Consequently, governments can incorporate an element of capital grant designed to offset initial private sector construction costs and associated ongoing debt repayments. Reducing debt service during operations enhances concession company stability. However, determining the appropriate level of capital grant and defining appropriate construction milestones is a challenge for project planners. If the capital grant element is too high, private partners assume too little risk, which reduces their incentives to provide the public with maximum value-for-money. Conversely, insufficient capital grants can destabilize concession companies and create large risk premiums that reduce project bankability.

Results-based or output-based subsidies can be effective instruments for public support. Structuring public support based on measurable outputs can help align public and private incentives to accomplish project goals. For transport PPP, output-based subsidies often take the form of ‘shadow’ fares or tolls paid by public authorities on top of each fare or toll collected directly from system users, which lowers user fares or tolls to socially acceptable levels but earns private partners reasonable returns. This is a good solution to transferring traffic or ridership risk to the developer while decoupling private compensation from fare or toll levels when public transport costs are politically sensitive.

Payments based on system availability are another output-based mechanism for structuring public support. Availability-based compensation schemes are also useful for insulating concessionaire revenues from demand risks. Governments need to consider the impact of explicit and contingent liabilities associated with output-based support mechanisms for PPP in highways, and factor these liabilities into initial affordability analyses and future budget provisions. A system of key performance indicators (KPIs) should be used to adjust availability payments linked to concessionaire performance.

In 1997, Argentina introduced a new contract combining rehabilitation and maintenance based on positive experience with performance-based routine maintenance contracts. The CREMA (the Spanish acronym) requires the contractor to rehabilitate and then maintain a sub-network of roads for five years for a lump-sum.

Contracts are awarded to the lowest evaluated bidder, and each contract covers a network ranging in length from 100 to 300 kilometers. The contractor carries out a detailed engineering design and can propose any rehabilitation solution above the minimum threshold defined in the contract. Payments are linked to achieving a specified level of service and performance is assessed during monthly inspections jointly carried out by the engineer and the contractor. Rehabilitation works must comply with agreed maintenance levels throughout the contract period.

**Problem with Phase I Contracts**
The CREMA contracts between 1997 and 1999 specified rehabilitation works to be carried out in the first year of the contract. The contractor received 5-10 percent of the contract price as an advance payment, between 15-25 percent at the end of the first six months once specified activities have been executed and 25 percent at the end of the first year when rehabilitation works are completed. The contractor paid a 20 percent performance guarantee upfront. The remaining 50 percent was paid in 48 equal monthly installments spread over the remaining four-year contract period, for maintenance.

This front-loading of rehabilitation and delayed payment schedule resulted in contractors having to finance much of the rehabilitation themselves. The rehabilitation costs also often exceeded 50 percent of the contract value.

**CREMA Phase II**
In the new generation of CREMA contracts, the contractor receives full payment for rehabilitation works executed, proportionately to the outputs achieved during the first eighteen months of execution. This increased the attractiveness of the CREMA contracts to the private sector by reducing the amount of pre-financing, but also reduced the risk transfer to the private sector.

Although it may still be possible to have the private sector pre-finance some of the rehabilitation work, this example also illustrates how a concept may have to evolve over time after being tested by the market.

*Source: Global Partnership on Output Based Aid (GPOBA) Review 2010.*
Cluster B: Risk Management

As mentioned in Chapter 2 there are a variety of risks. Risk is defined as uncertainty, or the perception of uncertainty; under the current market liquidity crisis, the perception of uncertainty must be mitigated as much as possible. Broadly, grantors should maximize efforts to reduce investor risks to attract more private capital at a lower cost. Some of the methods of accomplishing this include the following:

- Improve information on potential risks
- Use continuous consultations with potential bidders and financiers to establish an appropriate level of risk sharing that incorporates the changed perceptions since the crisis.
- Establish mechanisms or instruments to mitigate or underwrite risks, such as the following.

Specific risk protection instruments

**Sinking funds can mitigate the risk of funding ongoing investment needs.** Expenditures required to maintain infrastructure condition and integrity can be substantial and periodic in nature; however, revenues in highway PPPs, for example from tolls, are continuous in nature and may fall short of covering full costs when large maintenance investments are required. Therefore, if private partners assume responsibility for funding maintenance investments, mismatches that arise between revenues and expenditures can jeopardize their financial strength. To mitigate risks associated with this mismatch, lenders or public authorities can require special reserve accounts for these expenses. These ‘sinking funds’ (e.g., maintenance reserves, rehabilitation reserves) accumulate continuous cash flows from project revenues for specific future expenditures; this increases up-front project costs. Typically, lenders require rights over sinking funds as additional security against project debt; if a borrower defaults, sinking fund assets will help offset any potential losses on project debt in the order of seniority. Public authorities would rarely specify sinking funds, unless a private partner has responsibility for maintenance investments and their value at risk is small relative to envisaged expenditures.25

**Refinancing provisions within the PPP agreement can mitigate changing circumstances throughout project lifespan.** Project capital and debt structure can significantly affect investor returns and concession financial risk profile. Striking the balance between stability and appropriate rates of return usually occurs towards financial close when lenders conduct extensive due diligence and specify restrictive covenants on project debt to minimize default risk. However, market conditions and project credit profile rarely remain constant throughout project lifespan. Favorable changes provide potential for additional value capture by opportunistically altering elements in project capital or debt structure. For example, a concession company could extend the maturity of project debt within the constraints of PPP contract term, or reduce interest rate margins, or replace the hedging instruments, or a combination of these options. This could reduce the debt repayment profile, freeing extra cash to pay dividends or invest in service improvements.

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25 See HM Treasury.
26 Profit maximizing developers and investors would naturally pursue refinancing whenever gains sufficiently exceed associated costs (e.g., transaction fees, additional financial risk, hedge breakage costs, etc.). However, other refinancing opportunities could be less predictable, especially in rapidly developing countries where sovereign risk spreads decline as governance improves, macroeconomic conditions stabilize, and local capital markets develop. Similarly, financing terms may improve when systems deliver several years of sound operations and timely debt service, or when contracting authorities exhibit competence at managing privately financed infrastructure projects. In practice, opportunities for later-stage refinancing often arise from combined public and private efforts, therefore a skillfully crafted concession contract will include options for sharing opportunistic refinancing gains between public and private partners.

Box 7-2: Refinancing Gain – HM Treasury Guidance

The United Kingdom HM Treasury Department provides detailed guidance on refinancing and arrangements for sharing in version 4 of its Standardization of PFI Contracts guide. Specifically, the Treasury in the October 2008 Amended Refinancing Provisions, states that the grantor (“Authority”) is entitled to 50-70 percent of such refinancing gains depending on the amount and kind of gains generated, and subject to Authority approval and value-for-money analysis. Transactions where sharing may be warranted include:
1. Reduction in interest margins;
2. Reduction or release of reserve accounts;
3. Release of contingent junior capital;
4. Extension of the maturity of debt;
5. Increase in the amount of debt; and
6. Refinancing undertaken without the direct involvement of the Contractor.

HM Treasury also mentions that certain transactions should not require Authority consent and would not require sharing. These include:
1. Disposal of junior capital, which in terms of rights is equity in all but name.
2. Refinancing agreed in the project’s base case financial plan;
3. Transactions originally taken on a corporate finance basis;
4. Gains on interest rate hedging;
5. Changes in taxation or accounting policies; and
6. Qualified banking transactions such as syndication or securitization of loans.

Considerable analysis should precede an agreement to refinance any portion of project capital structure. HM Treasury recommends that contracting authorities should diligently analyze refinancing potential to increase termination liabilities or otherwise impact the operational / policy flexibility of contracts.

Source: HM Treasury (HYPERLINK "file:///C:\Users\Local%20Settings\Local%20Settings\www.hm-treasury.gov.uk\www.hm-treasury.gov.uk").

*Profit maximizing developers and investors would naturally pursue refinancing whenever gains sufficiently exceed associated costs (e.g., transaction fees, additional financial risk, hedge breakage costs, etc.). However, the benefits of refinancing decisions for public institutions may be less clear given different policy objectives and reduced appetites for risk. In addition, refinancing may limit project flexibility or may create additional termination liabilities for contracting authorities. Value-for-money analysis should precede any agreement on changes to project capital structure. Well-designed contractual arrangements should include mechanisms to capture refinancing opportunities that benefit public and private partners.

*See Yescombe.
**Hedging instruments provide mechanisms that help public authorities and private developers manage financial risks associated with contingent and other liabilities.**

However, hedging instruments provide counterparties with future rights or obligations or both. Hedging is common in PPP projects, often to offset exposures to factors such as foreign currency movements (e.g., swap and forward contracts/options), large purchases of raw materials and other project inputs (e.g., forward contracts for steel and concrete), interest rate movements (e.g., swaps), counterparty risks (e.g., credit default) and so forth. Hedging mechanisms provide comfort against a range of exposures, which increases project bankability, but commercial lenders often earn as much from hedging instruments as from project loans. Consequently, to reduce costs, as circumstances permit, Governments should design natural hedges that eliminate risky exposures. For example, obtaining loans in local currency allows projects to match revenues with debt service payments, avoiding expensive currency swaps\(^27\) or public sector expense for foreign exchange currency risks.

**Box 7-3: Hedging and Concessionaire’s Capital Grant**

Constructing the Gautrain Rapid Rail Link in South Africa involved a substantial capital grant that private partners used to fund most upfront system costs, many of which were denominated in foreign currencies. Therefore, ensuring project financial viability required guarding against potentially destabilizing fluctuations in foreign exchange rates.

Originally, during project construction, Gautrain’s concessionaire assumed foreign exchange risks and passed along associated hedging costs to Gauteng Province as a component of capital grant payments made at project milestones. Since the concessionaire’s bankers were not forced to compete on their forward rates, this structure resulted in unfavorable forward currency pricing and the bankers took full advantage of the pass-through nature of project hedging costs. In response, Government intervened during the construction period, and retrieved capital grant-related foreign exchange risks from the concessionaire—effectively acting as a currency swap counter party to Gauteng Province. This eliminated additional cost associated with unfavorably priced currency hedges and insulated the province from foreign exchange exposure on its capital grant payments.

**Contract variation mechanisms should be incorporated to minimize viability risk.**

Changes in the technical/financial environment of individual PPP projects over a 20-30-year project life are difficult to predict, so it is essential to adopt the best contract variation mechanism to maintain long-term contract viability, and avoid emergency interventions by government or other parties to prevent project collapse. This should lower investors risk, which should lower prices.

\(^{27}\) See reference
Cluster C: Procurement

Procurement is crucial in developing bankable PPP’s. Procurement processes must be flexible enough to respond to current market constraints, transparent, and robust. This section details basic issues that may enhance bidding processes and discusses how funding competitions can be a strategy to obtain financing. Recommendations follow on transforming strategies into contractual terms to lock in desirable project sponsor actions to enhance overall project bankability.

Basic principles of open, transparent, and fair procurement systems will reduce perceived market risks. The grantor or government advisers must have realistic and practical knowledge of current financial markets, and ability to explain market needs to their clients. Dealing with market concerns usually creates viable financeable projects, and minimizes the need for a more expensive scheme to assuage higher perceived risks. In this regard, the contract must acknowledge and provide for dealing with the cost of potential, and likely, restructuring over the PPP project lifespan. Furthermore, it is recommended that banks or other commercial lenders should not commit exclusively to any bidder prior to preferred bidder selection.

Financial arrangements take many forms. Under a staple financing approach, government develops a financing package to be offered at the bidding stage. Bidders can opt for either the government financing strategy, or develop one of its own. Under staple financing, Government benefits from bidder competition, but protects its interests with the “staple” offer as a back-stop. Staple financing is designed primarily for refinancing existing projects rather financing new projects (see refinancing description below).

Funding competitions are a strategy for gathering commercial lenders after a bid has been awarded. Typically, a funding competition is organized to seek the best available terms from the market; each consortium contributes financial expertise and credibility to obtain the best terms for the grantor. Originally, funding competitions aimed to reduce costs by inducing competitive pressure on finance markets. Typically, competing groups of funders such as banks and capital market investors are asked for their best terms based on the selected bid. However, this process is complex so the Granting authority must have adequate expertise and resources. In its original form, the funding competition is not a good fit for the current market, which has insufficient liquidity for much competition. Therefore, other approaches may be more suitable; some examples follow.

28The recommendations made herein are not based on World Bank procurement procedures nor are they intend as guidance to substitute World Bank procedures, but rather are based on the review by the authors of some of the PPP bidding practices and any suggestions made are done with a view to ensure the most effective competition, transparency and fair treatment of bidders.
“Competitive” book-building. Under this approach a preferred bidder is allowed to access the broader funding market, including funders previously associated with unsuccessful bidders. Funding is competitive as described above.

A combination of the above. An alternative is to split financing from the rest of the project, and evaluate proposals based on technical aspects including design, build, maintain, and operate. Government could merge the two tenders at financial close under bidder responsibility, or could maintain control of financing during the contract period.

Funding competitions tend to reduce competitive tension and strategies need to be devised to mitigate this. Funding competitions tend to delink financial aspects of the bid from technical, legal, and commercial aspects, failing to differentiate among bidders’ risk appetites as reflected in equity returns and overall project profitability. The winning bidder’s “price” may leave the grantor without a firm number attached to the winning bidder selection. Potentially this could result in a ‘hostage’ situation when debt and equity financing is subsequently added to the technical solution, which would mean that the project capital expenditure is not locked in at the bid stage. Therefore, mechanisms should be formulated to create incentives to achieve the most suitable financing solution.

Refinancing strategies should be built into the PPP agreements through for example ‘soft or hard mini-perms’ that can bring value by reducing short-term financing costs and by increasing pressure on all parties to rapidly improve financial terms. The rationale is to increase the probability of an early exit for lenders and avoid locking the project into unfavorable long-term conditions. Banks used to lend long term on the expectation of a rapid take-out through refinancing. This was a reasonable assumption in the pre-crisis market. Mini-perms use a strategy whereby a margin step-up is built into the lending agreements 3-5 years after construction completion. Lenders can opt to force an aggressive margin step-up and cash sweep (“soft mini-perm”), or even compulsory refinancing, and the banks can call the project into default if it does not occur (“hard mini-perm”). Government must then decide whether to assume the refinancing risk, or assign it to the private sponsors. Care must be taken not to allow sponsors what amounts to a free exit option, which leaves Government with unquantifiable bet on the future.

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30 This concept has been used successfully in the UK market around 2004-5. However, in the UK, this process was simplified as the funding obtained was under a competitive process for projects that used standard PP contracts. Banks were already familiar with projects using these standard contracts and therefore comfortable with project risks. Specific examples include Bart’s and Royal London Hospitals.

31 This approach implies that major changes will be needed to the bidding documentation for example, technical selection criteria, Bid Bond (linked to Financial Close but under best endeavours basis), and changes to the PPP Agreement will also mean a specific process for the period between Commercial Close and Financial Close.

32 Mini-perms are extended refinancing clauses; after 7 to 15 years refinancing is “forced.”

33 Typically, no principal repayment is envisaged during the period prior to the mini-perm.
Cluster D: Project Design

Many issues described here relate to improved project design; below are some major considerations.

**Hybrid contracts are a pragmatic approach under current market constraints.** Generally, PPP infrastructure contracts blend public and private funding and can include some fixed risk-sharing mechanisms. Considering current market conditions after the onset of the crisis, and future fluctuations in the project environment, it would be beneficial to adopt more flexible contract structures with the aim of (i) attracting suitable funding, where flexibility diminishes perceived risk; and (ii) adapting to potentially advantageous changes to project structure as future conditions change. Generic contract details are impossible to prescribe, but what follows are suggested improvements for developing hybrid contracts. Government may consider benefits from the following.

- Consider adopting a progressive risk transfer after about five years because early years’ risk allocation of the contract could change.
- Adapt the financial support mechanism, such as capital grant or indexation coverage, to be triggered only after a specified period.

Government can provide guarantees to support infrastructure investments and transfer some risks from the developer to government. During project construction, developers may be utilizing inputs with exchange-rate dependent costs causing input value to rise and fall with local currency rates. Government could provide an exchange rate guarantee to mitigate currency depreciation effects (e.g., toll dollarization). However, when government guarantees cover a risk better managed and controlled by the developer, developer incentives to improve performance levels decline. Furthermore, the contingent nature of these guarantees complicates their valuation, and therefore, how to account for them in Government financial and budget reports.

Indexations that reflect underlying cost exposures faced by developers can reduce cost risks and increase savings over contract duration. A primary risk for the developer is costs inflating over the PPP agreement lifespan, rendering payments insufficient to cover operating and financing costs. Governments can examine how indexation is being utilized within the contractual structure; clearly this depends on the nature of the PPP highway or transport project. Indices, proportions or certain pass through cost escalations should be determined by the grantor, not the bidding developers, to clarify comparison of rival bids. Developers are protected by benchmarking or market testing, but in developing a strategy to cover inflation risks, value-for-money should be achieved by indexing the proportion of Government payments (e.g., availability payments) that matches the proportion of total costs represented by any of the components of the Developer’s underlying costs which are not fixed.

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35See HM Treasury, Supra note
The Canada Line rail rapid transit system is part of an integrated transport network for the entire Vancouver metropolitan region that includes commuter rail, light rail, bus, and marine transportation services under the supervision of regional transportation authority, TransLink. TransLink has full responsibility for setting and structuring fares, integrating service modes and other policy-related decisions across the network, including the Canada Line. When planners structured risk allocations for Canada Line’s concession agreement, they decided that TransLink would be best suited to endure most demand and revenue risks, given the impact that non-operating decisions had on system ridership. Nevertheless, planners wanted to align some portion of the concessionaire’s interests with TransLink’s ridership-related goals so the Canada Line contract ties 10 percent of concessionaire payments to customer volume. Calculating this volume payment involves:

1. A base forecasted credit ridership estimate (excluding ‘airport-only’ ridership)
2. An agreed base volume payment
3. An agreed shadow fare per paying customer

During the system’s operating phase, this information determines the following three payment scenarios:

1. If ridership equals forecasts, the concessionaire receives the base volume payment.
2. If ridership exceeds forecasts, the concessionaire receives the base volume payment plus the difference between actual and forecasted ridership, multiplied by agreed shadow fare.
3. If ridership falls below forecasts, the concessionaire receives the base volume payment minus the difference between forecasted and actual ridership multiplied by agreed shadow fare.

Independent consultants prepared the initial ridership study for the Canada Line, on which the system base credit ridership estimate is based. However, the Canada Line contract specified automatic revisions to the forecast when services commenced, two years later, and every five years thereafter. Also, either TransLink or concessionaire can trigger a forecast reassessment if any of the following changes occur:

- The system’s service plan changes
- Planners expand services by adding stations along the existing route
- Bus services change
- Regional Traffic Demand Management initiatives change (e.g., changes in road pricing or tolls)
- TransLink increases fares more than 5.0 percent in real terms over the average fare during the five previous years
- Changes in the system’s fare structure
- Average morning peak hour ridership during a three month period exceeds a specified level near the system’s maximum designed capacity.

The use of Cost Pass Through formulae to allow for cost changes should be carefully introduced to ensure overall bankability. PPP agreements should be designed to cover the cost of risks over which the developer has no control. As may be applicable depending on the type of PPP highway agreement, when input costs rise, the adjustment rules agreed upon between the developer and the grantor will need to allow for changes in the costs to be passed through—either to government, or in the case of tolls through the toll itself, subject to ceilings above which it may be necessary for the grantor to provide direct support.

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Note: This may also include special provisions for fare indexation to alter fares to reflect changes in an index of prices and does not necessarily reflect changes to developer costs. The indexation process aims to compensate the developer for the effect of exogenous cost increases on developer inputs. Importantly, indices reduce the risks faced by the developer without blunting performance incentives. The indexation formula automatically adjust fares according to agreed rules. Specific indexation formulae can adjust fares according to changes in either the rate of inflation, consumer price indices or a consumer price index (related to changes in the system’s likely costs such as a basket of prices, exchange rates or specified inputs).
8. CONCLUSION: SHORT- AND MEDIUM-TERM RESPONSES

The crisis that began late in 2008 impacted the private sector beyond the lack of liquidity and higher capital costs. Countries in the region found themselves having to support substantial infrastructure investment needs while facing a much-reduced fiscal space and unable to access cheap long-term financing. Although PPP still has potential value for ECA countries in light of their significantly reduced fiscal space, the fundamental scope for PPP has changed. Higher capital costs make PPP a more expensive option, and the market expectation is now that projects will be prepared and procured differently.

Governments must be more involved in financing PPP projects and ensuring long-term financial sustainability during project preparation. Now, ECA countries may find it difficult to attract private investment for projects of US$1 billion and above, making rehabilitation of existing assets a more viable option than new construction. New difficulties and delays in reaching financial close require a more flexible bidding process so the concessionaire can make a proposal even if the financial terms are not fully secured. Project preparation must take into consideration that some risk allocations, such as a concessionaire assuming part of the traffic risk, may not be possible anymore.

In the past, ECA country governments often used PPP to fund large infrastructure assets while keeping the associated debt off the balance sheet. Now, the higher cost of capital and need for governments to provide additional financial support and guarantees has reduced the potential for off-balance-sheet accounting. This reduced the scope for PPP in some countries, despite increasing needs across the region for the type of value-for-money that private participation can bring. Therefore, to capture the benefits of private sector participation in ECA infrastructure, countries may need to refocus on efficiency gains provided by the private sector by emphasizing service delivery rather than assets construction.

A medium-term strategy for countries seeking significant private investment requires identifying bankable projects and allocating sufficient resources and guarantees. In the short term, governments have either delayed projects or provided additional support to reach financial close. Projects selected must first justify government involvement then be dimensioned to maximize economic benefits, and only if bankable, be prepared as a PPP project. Overall support to PPP projects, including financing and guarantees should be capped at the national level, with refinancing triggered when financing terms improve. Countries must manage PPP project direct and contingent liabilities to avoid increasing fiscal vulnerabilities in the medium-term in the aftermath of the crisis. The implication is that not all countries will be able to have an active PPP program in the immediate future.
Countries that have bankable PPP projects should make their PPP frameworks more flexible and include a financial component. A financial framework would incorporate financing mechanisms that are not project- or sector-specific but may be necessary to ensure that projects reach financial close. The legal and regulatory framework would need to be adjusted to encourage smaller projects and a value-for-money approach, and to enable more procurement process flexibility. Governments may have to establish new institutional arrangements, such as a dedicated investment fund for PPP, or an extended mandate for public institutions; both should exemplify transparency and good governance to help attract sustainable private participation.

Several mechanisms are available to support PPP projects. They should be implemented after the strategy and framework are in place and could cover the following categories: (i) finance, (ii) risk management, (iii) procurement, and (iv) project design. However, each country is unique and the same type of projects can have different risk allocations, depending on country circumstances. These mechanisms must be carefully analyzed for their fiscal implications on Government and effects on PPP projects and markets. Moreover, government support for a project sets up market expectations that other projects will benefit from the same mechanism.

Countries will require comprehensive solutions, beyond typical IFI financing or instruments or single project or sector approaches. The public or PPP project selection process will be more complex and national governments will need unbiased advice on the best solutions—leveraging private participation with public funds may be a better solution than replacing private funding with public monies. ECA countries, including those with PPP experience, may benefit from renewing policy dialogue with IFIs on PPP. Although coordinating collaboration among all IFIs is complex, it may become even more critical to the region.

Finally, the role of the EU is even more important in determining the future for PPP. Countries both within and outside the EU have based their investment decisions on PPP based on Eurostat guidance. The recent communication on PPP from the EU is an important step in addressing the main issues but more is needed to help countries revive PPP. ECA countries would benefit from incentives to prepare PPP projects with a stronger focus on value-for-money and sustainability.
REFERENCES


ANNEX 1
LIST OF INTERVIEWS CONDUCTED
In addition to the survey and desk research, the following persons were interviewed to provide local and complementary perspective. The authors would like to recognize the time spent on providing advice on the causes and strategies in relation to the impact of the crisis on PPP in infrastructure. Individual contributions are not noted, to preserve confidentiality.

**Private Companies**
- Gijs Voskuyl, Associate Director, Dutch Infrastructure Fund, Amsterdam
- Sven Kottwitz, Associate Director, Project and Export Finance, and Euan McLeod, Associate Director.
- HSBC – Global Banking and Markets – London
- Paul Norris, Director Infrastructure Capital, VTB Investment Bank, London
- Forbes Johnston, Regional Manager, Transport, Mott MacDonald, Transaction and Technical Advisers, Southampton
- Nigel Pritchard, Transaction Lawyer; Troy Edwards, Allen Overy, Legal/Transaction Advisers, London

**Academics and independent consultants**
- Cristina Simón Morientes, Director – Deloitte Spain
- Carlos Lopez Corral, Adviser, Spain
- M. Rosário M. R. Macário, Professor, Instituto Superior Technico, Portugal
- Peter Brozek, PPP adviser to Slovak government

**Government agencies**
- Irena Herbst, PPP Centre, Poland
- GDDKiA (Road Agency), Poland
- Zaiga Steina, PPP Project Manager, Latvia State Roads
- Marijan Blazevic, Assistant Head of Economy and Finance Dpt., Croatian Motorways Ltd
- Russian Federation Ministry of Transport

**World Bank staff working on the transport sector, Europe and Central Asia Region**
- Martin Humphreys (Balkans)
- Chris Bennett (South Caucasus)
- Sri Kumar Tadimalla (India)
- Tatyana Shadrunova (Moscow)
- Aliya Mukay (Kazakhstan)
- Oleg Kudashov, IFC Advisory (Montenegro)
- Mauricio Riberes, IFC Advisory (Brazil)

**Other IFIs**
- Thomas Meier, Business Group Director Infrastructure; Sue Barrett, Transport Sector, EBRD, London
- Manzoor Rehman, Asian Development Bank
ANNEX 2
PPP INFRASTRUCTURE FINANCE
AND PRE-CRISIS EXPERIENCE
Rationale for PPP

Consideration of PPP starts with a detailed comparison of net costs of public versus PPP procurement. For example, the United Kingdom developed a detailed methodology to make such comparisons. “Value-for-money” is defined as the optimum combination of whole-life costs and quality, or fitness-for-purpose of goods and services to be procured by the public sector. Notably, the value-for-money concept does not imply lowest-cost option, as it does in the procurement legislation of many ECA countries.37 Instead, it means that the public sector must ensure valuation of critical risks, for example, using methodologies adequate to assess contingent liabilities, negotiated changes in proposed PPP risk profiles, and any explicit variable liabilities such as operating subsidies and minimum revenue guarantees. This type of assessment also considers potentially considerable development costs associated with bringing a PPP project to market, especially if institutional capacity is lacking and public authorities use external advisers.

PPP can look attractive from a cash-flow perspective. Frequently, government aims to improve the efficiency of public investment to lower the cost of public services and create fiscal space. When governments use private investment, PPP projects change budget cash flows because PPP projects rarely require the same upfront government investment as the private sector is expected to raise financing. In addition, PPP projects are often linked to introducing user charges for assets, for example, highway tolls.38 This changes project cash-flows from a budget perspective, as shown below.

Figure II-1: Cash Flow for PPP and Publicly Financed Projects

Source: Rebel Advisory.

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37Russian Federation procurement law specifies engaging the lowest cost offer, which was a major challenge in developing a series of PPP projects that the city of Saint Petersburg was implementing between 2008 and 2010.

38The decision to charge highway tolls is not linked to how infrastructure is financed. Nothing prevents Government from introducing tolls in publicly financed highways, but since revenue is from either budget or users, many PPP projects are implemented together with new user charges.
As a result, decision makers seeking a short-term solution can potentially choose PPP even if it is not cheaper than the public alternative. Government and line ministries’ budgets are often insufficient to cover maintenance, rehabilitation, and new investments. Typically, infrastructure assets have a long life so most governments issue bonds or borrow from IFIs to fund infrastructure projects. However, across the ECA Region, EU member or EU accession countries must meet EU criteria for budget deficit and public debt limits. Therefore, PPP becomes attractive due to its potential to replace immediate capital investment with a series of recurrent payments. Moreover, if user charges are introduced, the net payment from budget is low. However, using PPP to improve the budget in the short term effectively ignores longer-term fiscal implications of recurrent payments and the present value of recurrent payments over extended periods.

A cash flow approach may also hide contingent liabilities associated with PPP projects. Some risks are difficult to transfer completely to the private sector. For example, traffic flows are not only outside of private sector control, but also affected by public policy decisions. Consequently, the private sector will never fully assume this type of risk; therefore, the public sector typically provides minimum revenue guarantees to compensate the private sector if traffic falls below specified levels. However, since the magnitude of this compensation is contingent on unpredictable future events, it represents potential liabilities that are rarely captured in budgets. Experience has shown that most forecasts tend to overestimate actual traffic by about 30 percent, which could burden the public sector budget with significant liabilities. However, such contingent liabilities are often not managed or even reported, so another incentive may be to accept such liabilities if they help avoid direct budget contributions.

Many ECA countries use PPPs as a fiscal instrument, especially in CEE and SEE. Since many ECA countries are either EU members or aspiring to EU membership, they are influenced by EU guidance on PPPs. Under Eurostat accounting rules, PPP project assets and corresponding liabilities can be off-balance-sheet if the private sector partner carries construction and availability risks, regardless of PPP project size. This possibility can create a bias toward selecting PPP to develop infrastructure projects, because assets can be financed outside the budget envelope, a benefit that can trump value-for-money considerations.

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39Under an availability payment arrangement.
Box II-1: 
Eurostat Accounting of PPP Projects

Eurostat classification says that a DBOF asset is off-balance-sheet, therefore does not affect the General Government Balance (GGB) upfront over the construction period, if the private sector partner carries risks for construction, and either availability or demand. Under new rules, DBOF PPP projects are off the government balance sheet, and project costs counted against the GGB may be spread over the life of the PPP agreement, rather than over the construction period.

According to this classification, projects with capital costs that do not affect the GGB over the construction period, but rather during the operating phase of the contract include: Design, Build, Operate, Finance (DBOF) project for which the private sector carries the construction risk and either the availability risk or demand risk. Design, Build, Finance (DBF) projects where the contract is similar to an operating lease.

Projects with capital cost that will affect the GGB over the construction period include: DBOF projects for which the public sector partner carries most of the project risk: for example, the public sector carries the construction risk or carries both availability and demand risks; Design, Build (DB) projects; DBF projects for which the contract resembles a finance lease; Design, Build, Operate (DBO) projects; conventional public procurement projects.

These rules were established to clarify PPP project accounting, but they allow a PPP project design to account for assets off-balance-sheet. What remains on the account is any government availability payment but not overall debt levels. In the context of the financial crisis, or fiscal restrictions related to EU membership or accession, it is not surprising that most PPP projects that are being prepared in the region are DBOF.

It is unclear how PPP project accounting will evolve within the EU framework. However, it is becoming more difficult for projects to be off-balance-sheet because of changes in risk allocations due to the financial crisis or evolving accounting rules. A recent EU communication to the EU Parliament identified the need to ensure proper debt and deficit treatment of PPP.

Management of risks associated with PPP programs

The main risks associated with PPP are fiscal. Good practice in PPP program development recommends that public authorities implement only projects that are necessary, taking into consideration the long-term financial commitment associated with PPP. Although the public sector is usually asked to contribute to capital expenditure, some of its contribution is phased during the life of the concession. Because longer-term future payments (often 30 years) are typically unaccounted for in budget planning, the relatively small initial contribution may tempt public officials to implement an unaffordable project. However, the risk is that longer-term payments could restrict Oblast or municipal ability to finance other much-needed projects.

A PPP program could also constrain future spending through accumulated contingent liabilities. The cash flows in Figure II-1 appear attractive for a single project but if a PPP program is developed, it would result in an accumulation of payments. Given that a concession is often for 30 years, an active PPP program over, for example, 5-10 years may restrict future public investment, because government would have to service these contracts before considering other projects. The other issue is that government must often provide guarantees for PPP projects, and the more projects government undertakes, the more likely it becomes that at least some guarantees will be triggered, resulting in future payments to support the private partner. This may be problematic, especially in countries with limited fiscal space.

Countries with more successful experience in PPP have established eligibility criteria. Concerns about long-term fiscal impacts of PPP projects prompted governments to establish rules to ensure that projects demonstrate (i) value-for-money; (ii) optimum risk transfer to the private sector; and (iii) affordability for government. (Box II-2) The remaining key risk is that countries could not afford basic services or undertake future investments if payment levels become unsustainable. Brazil, for example, has established limits on future payments for PPP projects to protect future investments. This trend is emerging in the ECA region; Hungary is proposing an amendment to the Act on Public Finance that would count the total capital value of PPP investment for budgetary investment at the time of its accounting capitalization.

*European PPP Report (2009), EPSC.*
South Africa's Treasury Unit contains a dedicated group to oversee PPP transactions nation-wide. Before approving new projects, this unit will verify the following:

- Affordability. Public institutions must be able to meet their financial obligations under the PPP agreement throughout project lifespan. Current and anticipated budgets must be able to support any PPP-related expenses, including the costs of public oversight.
- Value for money. Private sector participation must offer additional value to the public sector through risk transfer, increased quality, or both. Without value-for-money, traditional public procurement is preferred to realize new infrastructure services.

**Typically governments must provide guarantees to the private sector for risks not under their control.** However, these risks carry premium prices that reduce value-for-money aspects of PPP. Guarantees can be triggered, but it is important to establish rules to ensure that staff in charge of PPP projects have the right incentives, information, and capacity to evaluate and account for the costs and risks of contingent liabilities. Below are some rules to achieve those objectives:

- Use cost-benefit analysis to select projects; use value-for-money analysis to choose between PPPs and public finance;
- Quantify costs and risks of contingent liabilities;
- PPP approval should occur at the level of the cabinet, or Minister of Finance, or a government body with an interest in future spending. The Ministry of Finance should review proposed PPPs;
- Governments should bear only those risks that they can manage through control or influence;
- Adopt modern accrual-accounting standards for financial reporting to reduce temptation to use PPPs to hide fiscal obligations;
- Publicly disclose PPP contracts, and cost/risk information on financial obligations imposed on government;
- Modify budgetary systems to capture the costs of contingent liabilities;
- Use a guarantee fund so the cost of guarantees is recognized when they are granted, and to help with payments if guarantees are triggered; and
- Government should charge fees for guarantees.
Box II-3: Chile Management of Contingent Liabilities

The Chilean government began using concessions in the early 1990s to build and upgrade roads. More recently, concessions have been used to finance jails, reservoirs, public buildings, and urban roads. Most of the road and airport concessions contain revenue guarantees, which typically ensure that the concessionaire can collect revenue with a present value equal to about 70 percent of the expected present cost of the project. Some guarantees have been triggered but the cost has been small relative to the size of the projects.

The Ministry of Public Works generally takes the lead in designing, awarding, and monitoring concessions. But the Minister of Finance must approve the concession contract and the Ministry of Finance is involved in the design of the concession contract, its award, and any contract renegotiations. The key group in the Ministry is the Contingent Liabilities and Concessions Unit, which has three members. Its responsibility is to monitor a wide range of contingent liabilities, not just those associated with concessions. The law on concessions and associated regulation require the Ministry of Public Works to obtain Ministry of Finance approval before issuing bidding documents. The Ministry of Finance’s role continues after the concession has been awarded.

In the early concessions, the government charged no fee for revenue guarantees but had a revenue-sharing agreement when revenue guarantees were provided. The Government now offers guarantees for a fee. The Ministry uses a model to estimate the cost of possible guarantees, to set guarantee fees, and to report information on the costs and risks of guarantees. The model generated an estimate of the probability distribution of future spending and revenue each year, which allowed estimates of cash flow at risk and similar measures.

Source: Managing Contingent Liabilities in PPP: Practice in Australia, Chile and South Africa (2009).
Pre-crisis Experience

Before the financial crisis, project identification in some ECA countries was not sufficiently rigorous. In PPP projects, bidders come with the financing and often, governments are paying only partial costs of the asset; even their financial support comprises only a portion of total project cost. For example, if the PPP project is a tolled highway with minimum revenue guarantee, governments may consider it an opportunity to gain a new highway for the price of bridge financing, which is their only contribution. However, funding sources remain the same—user charges or taxes—which explains why PPP should be viewed as a financing mechanism. This risk is often mitigated by introducing checks and balances within a PPP framework.

Figure II-2: Sources of Revenue for PPP and Public Highway
Strengthening institutional capacity

Successful programs are characterized by competent and enabled institutions that appropriately identify, procure, and monitor PPPs, and provide efficient oversight and dispute resolution procedures. It was this gap that led the United Kingdom HM Treasury to set up ‘Partnerships UK’ (PUK) in 2000 to develop PFI projects. Typically, individual line ministries have their own project finance units and can decide whether to seek PUK for advice on PPP projects. Now it is becoming common practice in most countries to have a cross-sectoral pool of expertise in a dedicated PPP unit to supplement capacities in the line agencies that contract for PPPs.

Chile. This broad and deep concession programs still needs regular interventions to address concerns and constraints to maintain its competitiveness. Though not a cross-sectoral PPP unit, the Ministry of Public Works (MOPW) has the largest infrastructure portfolio in the transport sector and leads Chile’s PPP program. Government has worked with the World Bank to strengthen the institutional capacity and project management of the MOPW, which has improved (i) strategic infrastructure planning; (ii) levels of infrastructure service standards, model contracts, and procedures that promote competition and assign risks appropriately; (iii) an integrated project management process; and (iv) the legal and organizational separation of planning, contracting, execution, and regulation of infrastructure provision. Chile has also worked with the World Bank to improve management of contingent liabilities arising from concessions.

South Africa. In 2000, Government set up a National Treasury PPP Unit to serve as focal point for coordinating and managing the PPP program. It is a good example of a central organization with a wide range of tasks, both advisory and mandatory, relating to PPPs. The Unit also provides oversight for PPPs undertaken by the provinces, and has been able to recruit skilled experts with private sector experience to help line Ministries design and structure sustainable PPP projects.

St. Petersburg. The entity, under the umbrella of the Committee for Strategic Investment, has already been established and is expected now to contribute to further strengthening the overall framework and provide support to the line committees on the preparation of projects.
Developing an appropriate framework to manage PPP projects and mitigate associated risks

A country’s solid legal, public policy and regulatory frameworks provides clarity to the private sector, increasing the attractiveness of a PPP project. It also allows the public sector to clearly define responsibilities, and manage the risks associated with PPP. Standardization of guidelines, process-related tools, model contract clauses, template contracts, approvals and monitoring rules can reduce both the complexity of PPP arrangements and project costs. Oversight procedures have more of an advisory role, leaving room for flexibility and innovation in designing the PPP arrangement. Several countries, including UK, Chile, Brazil and South Africa, have developed comprehensive and transparent concession laws, public sector goals and objectives in private participation. Equally clear is the process and terms by which the private sector is to be involved in the partnership.

Chile. Chile’s concession program was launched in 1995 to address the infrastructure investment deficit estimated at US$11 billion. The program’s objectives were to increase efficiency in service delivery and risk transfer to private investors. Since then investors have committed more than US$6.0 billion to 50 concession projects. Chile’s success with PPPs has been underpinned by: a solid institutional framework starting with the Concession Law of 1991; well developed procedures to identify, evaluate and tender projects; efforts to ensure the availability of private financing for projects. It’s Concession law was further improved in 1996 with enhanced mechanism for private initiatives, arbitration, changes to commercial banks provisions to facilitate financing of concession projects. Policy for contracts has also evolved with enhancements in risk allocation system, dispute resolution, revenue and exchange rate guarantees. Successful PPP examples include: Pan-American Highway, provincial airports, prison infrastructure, railways, irrigation, public transport and urban highways.

South Africa. Since 1999, Regulation 16 of Public Finance Management Act (PFMA), has governed PPPs, providing a clear and transparent framework for Government and private sector partners to enter mutually beneficial commercial transactions for the public good. Regulation 16 specifies all steps, including required approvals; it establishes that all PPPs must demonstrate value-for-money, appropriate risk transfer and affordability.

United Kingdom. HM Treasury issues policy notes and guidance materials on issues related to Private Finance Initiative (PFI) such as the long-term strategy, standardized contracts, and guidance on project assessment tools such as value-for-money, benchmarking, contract processing, implementation, and management. All PFI transactions must seek Treasury approval at several stages before final contract signature.

Ireland. The central PPP unit has issued detailed guidance on issues such as corporate tax, VAT implications, and stakeholder consultations. During contract implementation phase a mandatory project review takes place after five years’ operation, data is collected to facilitate benchmarking with similar projects and assess potential for value-for-money for future PPP projects. The review feeds into an ongoing process of monitoring cost efficiencies within the national PPP program.
Defining a broad PPP policy and sectoral reform program integrated with PPP

**Clear policies regulating PPPs and the role of the private sector are needed, including at the sectoral level.** Policies should specify PPP responsibilities at national and regional levels, sector reforms, and the role of the private sector. Some projects are unlikely to attract significant private financing unless accompanied by sectoral reform, and a sectoral approach clarifies the policy environment for the private sector, which lowers their perceptions of risk. In 1997, the UK passed the Local Government Contracts Act to clarify local government procedures for undertaking PPP contracts and related arrangements. In 2002, Ireland passed the State Authorities Act, which defined the possible range of PPPs that State Authorities could undertake.

**Canada.** The provinces of British Columbia and Quebec have their own cross-sectoral PPP units; the Federal P3 Office acts only as a resource and guidance center.

**Australia.** National government has had virtually no role in state-level PPPs and instead largely focuses on PPPs for public services for which Government is responsible. State governments have responsibility for developing PPPs for the services they provide, with little national Government involvement. The concept of a PPP at the federal level is relatively new and only recently the Commonwealth has issued PPP guidelines to define rules of engagement. But their mandate is limited to Federal-level projects. The Australian states continue to follow their own guidelines under the umbrella of Commonwealth laws of public financial management and procurement. All Australian states have policy documents that govern how to identify, establish, and operate PPPs, most of which draw heavily on the State government of Victoria PPP manuals.

**State of Victoria (Australia).** In 2000, State government introduced Partnerships Victoria (PV), which provides the framework for establishing PPPs to deliver public infrastructure and related services. PV focuses on whole-life costing and full consideration of project risks and optimal risk allocation between the public and private sectors. Some 18 PV projects were contracted for **Aus$4.5 billion in capital investment.** Since 2002-03, PV projects have accounted for about 10 percent of annual public asset investment commitments.

**Brazil.** Since 2001, government has been working on a broad policy and institutional reform program to rehabilitate its transport infrastructure, with World Bank support. Assistance has included restructuring Brazil’s transport sector administration with a new regulatory national agency for land transport (ANTT) and water transport agency (ANTAQ); creating similar agencies at the state level of Goias (AGR) and Bahia (AGERBA); financing consultants to support state government in pursuing private sector financing of high speed rail in San Paolo; railways privatization; support to the first State-level PPP for Sao Paolo Metro system; and policy work on Federal-level fuel tax revenues and regulatory accounting system.
Using external technical expertise to support PPP projects

**Competition is heavy for attracting private participation.** International investors tend to believe that a country or region with limited PPP experience poses higher risks. This perception requires the highest international standards of project preparation, which makes the use of international experts essential to PPP project success. In fact, even countries with established PPP programs continue to rely on international experts, but their increased institutional capacity enables them to undertake more of the tasks previously done by consultants.

**St. Petersburg.** The City has worked closely with the World Bank to prepare and procure four pilot PPP projects: the Western High-Speed Diameter, the Orlovskiy Tunnel, the Nadzemny Express, and the Pulkovo Airport. For the first three projects, the Bank has been a financial transaction adviser. In Pulkovo, the improved PPP expertise of the City allowed the Bank to play a more strategic role with the City; private companies were recruited for specialized functions.

**Involving independent international experts in PPP allowed the City to address several of the most complex issues in the pilot PPP projects.** City PPP experience was strengthened and capacity to develop PPP projects was improved through a formal training event, technical documents, and regular interaction with the World Bank experts. Pulkovo Airport reached financial close in 2010.
ANNEX 3
PRINCIPLES IN INFRASTRUCTURE AND PROJECT FINANCE
Infrastructure financing needs and public financing. **Governments are usually involved in infrastructure provision and financing.** Infrastructure services such as water and sanitation, electricity, waste management, and transportation are considered a “public good”, which justifies government involvement in delivery. Improving water quality and access, for example, provides benefits that exceed individual needs. Access to clean water reduces disease incidence and reduces child mortality. Access to roads supports transportation of goods and provides access to services such as schools and hospitals.

**Infrastructure assets usually have a long life, which requires a long-term approach.** Most infrastructure assets require huge initial capital investments, continuous maintenance, and regular rehabilitation. Lack of maintenance contributes to rapid asset deterioration, which requires more frequent rehabilitation. For this reason, public infrastructure investments must be carefully planned to secure sufficient funds for maintenance and rehabilitation before considering new construction. Traditional public sector infrastructure financing consists of budget allocation, or debt/bond issue. Typically, infrastructure projects are financed by taxpayers and users and government policy establishes the proportion from each; the financial vehicle is budget or borrowing.

**Fiscal space is crucial to overall economic and financial stability but can constrain infrastructure financing.** Fiscal space refers to the room in government budgets that allows government to provide services without jeopardizing financial sustainability or economic stability. Budget spending is guided by the need to maintain a low budget deficit and external borrowing by the level of public debt. The direct implication is that overall government spending must fit within a framework that ultimately reduces the potential for investment.

**Infrastructure Financing during Crisis**

**Infrastructure investment typically declines during economic crises.** Infrastructure investment is sensitive to economic conditions because it relies on governments’ ability to finance infrastructure expenditures. During boom times, governments have more revenue to invest and during crises, governments postpone infrastructure investments in favor of recurrent expenditures, for example, in health and education. Private sector revenues decline during crises, as does PPP investment. For example, in Indonesia, public investment in infrastructure dropped from 7.0 percent of GDP during 1995-97, to 2.0 percent in 2000; private sector investment dropped from 2.5 percent of GDP to 0.09 percent during the same period.

**Infrastructure maintenance expenditures also decline.** Optimum maintenance levels ensure long-term infrastructure value by minimizing longer-term costs of managing the assets. However, most low-income countries spend less than one-third of what is required for optimum maintenance and shortfalls of 40 percent or more are common, benchmarked against international standards. During the 2001 crisis, most countries saw an overall decline in road sector maintenance and rehabilitation, except for Uruguay. In Indonesia, infrastructure operations and maintenance dropped to 0.048 percent of total current expenditure, down from 1.22 percent in 1996, to 0.22 percent in 2000.42

Project finance as a source of infrastructure financing

*Project financing balances private funds (equity and debt) and public support.*

Project financiers examine how projects balance sponsor equity and debt financing (gearing). Project gearing will reflect:

- How much debt can project cash flows support?
- How risky or uncertain are project cash flows (market risk)?

*Most project financing aims to maximize gearing because debt is typically cheaper than equity:* nevertheless, equity requirements are usually substantial to penalize sponsors who withdraw commitment to project support. Debt-to-equity ratios of 75:25 or 70:30 have been common, although some more conservative export credit agencies have sought lower gearing (60:40). More risky project structures—when demand risk is transferred to the developer, are also likely to induce lenders to insist on lower gearing, and to increase the cost of debt—doubling the factors that increase project costs.

*Risk allocation and the certainty of project cash flows determine the nature and amount of debt that projects can support.* Spreads on project debt also reflect risk perception in addition to general market conditions at the time of issuance. For example, higher leverage for highway PPP projects with riskier cash flow characteristics is a recipe for failure, assuming that sources of debt and equity are even available on this basis.

**Project Bankability**

*The term ‘bankability’ indicates investor/lender willingness to commit debt or equity capital.* Infrastructure planners face the daunting challenge of optimizing project financial structure design to enable the private sector to recover its investment over the project lifetime. Therefore, PPP bankability extends well beyond financial considerations. Project viability analysis to determine bankability should include the following broad criteria:

- **Creditworthiness:** the project can generate sufficient cash flow to support required investments and qualifies for a specific project financing structure.
- **Legal viability:** the basic legal framework and associated laws and regulations enable a public and private sector partnership, protect the private investor, allow expropriation of profits, and provide overall commercial and legal certainty within a PPP arrangement.
- **Economic viability:** basic macroeconomic conditions are conducive and sufficiently stable for the PPP arrangement to succeed.
- **Technical feasibility:** PPP arrangements are compatible with technical solutions and appropriate for local conditions, construction, technology, and other project inputs.

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44 A successful PPP project reaches financial close and provides assets and services as expected during the life of the agreement. A renegotiated contract is not seen as a failure, because it may be triggered by many factors, including unforeseen circumstances.
Typically, project financial structure is finalized during later planning stages and involves an iterative process between government and private sector partners, including private sector lenders and financiers. This process ensures that the contract documents key decisions related to financing, including amounts of private sector capital that will be mobilized, and public sector support that will be required. Private capital mobilization may include equity contribution, subordinated debt, shareholder loans, or commercial debt, among others. Public support may include financial contributions such as a capital grant, supplements to project revenues, and guarantees for project debt obligation repayments under specified circumstances, so-called “comfort” clauses, to assure PPP lenders that the public sector will compensate or indemnify private sector lenders under specific circumstances, such as early termination.

Developing the most appropriate financing structure is critical for project bankability. During procurement, critical decisions are taken on the PPP project financing plan. Early decisionmaking must account for future financial and commercial structure; therefore, government must gauge market interest from potential lenders and private partners. During early PPP project development, public entities must gain a sense of how the market perceives proposed risk allocation and other project characteristics, or risk entering the lengthy and costly process of project development with little chance of success. The following table summarizes key investor/lender questions to assess project bankability and their level of interest.
Table III-1: Factors Influencing Project Bankability

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<tr>
<th>Project Aspects</th>
<th>Questions to determine bankability</th>
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<td><strong>Creditworthiness:</strong></td>
<td>Are project cash flows sufficient to support envisaged levels of debt? How risky are project cash flows? How certain are project revenues? Who bears demand risk (e.g., traffic levels) and how realistic are demand forecasts? Is there potential for regulatory ‘clawback’ if actual demand numbers exceed estimates and revenues are well above forecast? Can the grantor meet project financial obligations? Does project benefit from any grantor or sovereign guarantees? Will project benefit from guarantees/insurance on debt (e.g., partial risk or credit guarantees, political risk insurance)? Sufficient equity cushion to protect lenders if concession value decreases? Are project developers risking sufficient value? In the case of termination, what mechanisms guarantee debt repayment and what proportion of the debt will be covered? Do project developers have adequate capacity and incentives to deliver sustainable long-term operational performance? Do they derive significant value from activities ancillary to the concession company (e.g., local property development, turn-key construction contracts, etc.)? Do project financial ratios meet lender expectations (e.g., principal and interest cover ratios, debt service cover ratio, loan life ratio, debt/equity ratio)?</td>
</tr>
<tr>
<td><strong>Legal environment:</strong></td>
<td>Does grantor have authority to grant concession? Will project require additional legislation (e.g., sector law, PPP law)? Are project contractual arrangements strong with input suppliers (e.g., rolling stock)? What legal protections/channels for recourse do investors have in project jurisdiction (e.g., access to international arbitration)? Are legal decisions enforced (rule of law)? Are property rights strong in project jurisdiction?</td>
</tr>
<tr>
<td><strong>Economic:</strong></td>
<td>Is there a market for project services? Do project services offer sufficient value to consumers? Are there competing services (e.g., buses) or obsolete technologies (e.g., ticketing systems)? Is the system aligned with target markets/population centers? Regulation against the threat of new market entrants? Is regulatory environment stable? Are project inputs (e.g., construction) available? Reasonably priced? Stable supplies? How stable is project macroeconomic environment? How would changes in inflation, foreign exchange, interest rates, etc. impact project cash flows? How will such risks be mitigated in the PPP contract? Are there standby credit facilities to deal with potential lags between financial shocks and tariff adjustments?</td>
</tr>
<tr>
<td><strong>Technical:</strong></td>
<td>Does the project use proven technology or construction methods? Are construction costs reasonable and realistic? Is construction and commissioning timetable realistic? Does project rely extensively on proprietary technology? What standards govern construction of civil works, equipment and communication systems, etc? Are local standards available, adequate, and appropriate? How flexible is system design? Can simple alterations to design configurations increase system capacity? Is system designed for additional growth? Is proposed technological solution appropriate for local conditions and availability / scarcity of skilled labor?</td>
</tr>
</tbody>
</table>

Source: Authors.
Financial Structure: Role of Public and IFI Funding in ECA

Most infrastructure needs in ECA countries require massive investments that are unlikely to come only from the private sector. Initial lender due diligence and subsequent monitoring can enhance project transparency and quality. Since banks or other lenders may require significant changes to project structure or agreed risk allocation before committing financing, they should be consulted as early as possible in the procurement process. Although changes to project structure can help rationalize risk allocations or enhance PPP transport and highway projects in other ways, these changes can absorb substantial amounts of time to negotiate, and can damage project and grantor credibility. Hence, from project inception it is important to develop a bankable project structure; public authorities can hire experienced transaction/financial advisors familiar with the process of taking PPP projects to market to obtain financing, typically from investment/project finance banks or IFIs.

EU integration and changes in trade flows increase demand for new highways and higher quality road networks. EU accession has removed trade barriers and created a market for goods from ECA countries. Roads are now the main transport mode for freight and passengers; car ownership is rising along with incomes, and the trucking industry is more competitive. During 2000-07, road cargo volumes in Poland increased by more than 100 percent while other transport modes remained stable. Finally, CEE/SEE countries are linked by the pan-European road network and connections to these high-traffic highways need to be improved.

Most ECA countries had fiscal restrictions prior to the financial crisis. Before the financial crisis, infrastructure investment needs in ECA were significant, and the PPP option was attractive to governments as off-balance-sheet financing. Now, most ECA countries face deteriorating fiscal circumstances and rising needs for infrastructure; funding for the transport sector has been declining and demand for investment has surged. At the same time, EU member and accession countries must meet criteria for fiscal discipline, including budget deficit and public debt. Under EU accounting standards, PPP project assets and liabilities can be recorded off the national budget balance sheet, if the private partner bears (i) construction risk and (ii) risk for either availability or demand.

Preparing PPP projects for IFIs (including the World Bank, EIB, EBRD and IFC) financing can help attract private sector finance. IFIs can participate financially in PPP projects, first by lending directly to the concessionaire, as commercial banks would do. In this case, IFIs would provide the same terms to all bidders and undertake due diligence of the PPP project. Although IFI involvement is financial, they also focus on good practice in procurement, social, and environmental issues, based on Equator principles. Second, IFIs support the public sector financial contribution to projects through long-term loans, often in foreign currency, but sometimes in local currency. Often a counter-guarantee is required from national government but loan terms are often very attractive because they offer very long maturities and low interest rates. Finally, IFIs can also provide risk mitigation instruments such as Partial Credit Guarantees to concessionaires; often the private sector sees the project as less risky if IFIs are involved.
Box III-1: Environmental and Social impacts of PPPs and the Equator Principles

International commercial lenders are increasingly conscious of project social and environmental impacts; this is relevant to PPP transport projects that run along extensive alignments in populous urban environments.

Over 60 of the world’s leading financial institutions have now adopted the Equator Principles, a set of voluntary financial industry guidelines to determine, assess, and manage environmental and social risks in project financing.

The Equator Principles Financial Institutions (EPFIs) aim to ensure that the projects they finance are developed in a socially responsible manner that reflects sound environmental management practices. The PPP projects must carry out environmental and social impact studies and public consultations to attract financing from these institutions.


ECA countries benefit from the direct support of IFIs and EU programs. The World Bank Group, including IFC and MIGA, has a strong presence in most ECA countries, providing technical assistance, loans, including sub-national loans, and guarantees. The EBRD and EIB are also present and have enlarged the number of participating countries. In 2008, the EIB increased total loans to €57 billion from €47 billion in 2007. Finally, the Asian Development Bank (ADB) has a strong presence in Central Asia and South Caucasus, including Armenia. The European Commission, (EC) often through EIB, has established several initiatives (see Box III-2) to support PPP projects in the Region, often projects aligned with EU initiatives, such as the Trans European Network.

Technical assistance has been available to strengthen institutional capacity and prepare PPP projects. The World Bank Group has been providing technical assistance on a broad range of PPP issues, from unit set-up to policy and project viability. The multi-donor facility, PPIAF has been funding technical assistance for PPP to several ECA countries. At the EU level, initiatives aiming to combine structural funds with PPP projects can draw on several programs, including JASPERS (technical assistance at any stage of the PPP/infrastructure project cycle); JESSICA (for sustainable urban investment for PPP/urban projects included in an integrated urban development plan; and JEREMIE (to support new business creation and improve access to finance for enterprises).

Dedicated centers of expertise have also been set up to provide long-term support. At a global level, the World Bank Institute has been active in developing global knowledge products on PPP and building regional knowledge hubs. At the EU level, the European PPP Expertise Centre (EPEC) will provide support to enhance public sector management capacity for PPP and help EU member states better use PPP to optimize the value of structural and cohesion funds. The United Nations Economic Council for Europe (UNECE) has been organizing conferences in the region and is seeking to establish a regional PPP Centre.
Box III-2: Examples of Financial Instruments to Support PPP

World Bank Partial Risk Guarantee (PRG)
The PRG covers private lenders against the risk of a government, or government-owned entity, failing to perform contractual obligations under private projects. The PRGs facilitate project financing by covering risks that private financiers cannot or will not accept, which helps governments attract more bidders, for example, in the case of infrastructure projects or privatization, resulting in lower user tariffs or higher privatization proceeds. The PRGs can backstop a range of sovereign contractual obligations, depending on project, sector, and country circumstances. Risks covered under PRGs may include government payment obligations such as termination payments, or subsidies; contractual performance of public counter-parties such as PPA payments by state-owned utilities; change of law/regulatory risks; standard political risks such as currency convertibility/transferability, expropriation, war and civil disturbances; and so forth. Under PRG, payments are made only if debt service default is caused by specified risks.

Loan Guarantee for Ten Transport (LGTT)
In 2008, LGTT introduced this guarantee instrument, which began operating in 2009; the LGTT is a mezzanine product that provides coverage of traffic volumes related revenue risks during the critical early operation phase of eligible TEN-T projects. The financial plan for LGTT projects provides for a standby credit facility (offered by commercial banks), which may be drawn if the initial ramp of traffic volumes is insufficient to meet senior debt service obligations. Once drawn, facility repayment is guaranteed by the LGTT; risks of recovery of the guarantee payment are shared between the EIB and the EC. LGTT can significantly improve the economics of eligible projects by raising the credit rating, thereby reducing the margins on senior debt. LGTT is also effective in leveraging EC funding for TEN-T projects.

The Marguerite Fund
The Marguerite Fund was initiated in September 2008 as a key measure of the European Economic Recovery Plan, and at the request of the ECOFIN Council. The Fund will raise €1.0 billion of equity, and a Debt co-financing Initiative (DCI) of €5.0 billion from public and private institutional investors. The Fund will operate on market principles and invest in energy, climate change mitigation, and transport infrastructure.


The EU is reviewing incentives for developing PPP projects. A 2009 Communication on PPP from the EU Commission to the European Parliament identified constraints to developing EU-level PPP projects, and identified actions to complement Member State initiatives. These actions include: (i) improve access to finance for PPP by reinforcing and broadening the scope of existing instruments; (ii) facilitate PPP set-up using public procurement, including preparatory work on a legal proposal for concessions; (iii) ensure proper debt and deficit treatment of PPPs, including ‘balance sheet’ implications for PPP assets of revised financing arrangements; and (iv) improve information and disseminate expertise and know-how.

*From the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions, “Mobilizing private and public investment for recovery and long-term structural change: developing Public Private Partnership”
ANNEX 4

IMPACT OF THE FINANCIAL CRISIS ON FISCAL SPACE AND INFRASTRUCTURE SPENDING IN ECA
Fiscal prospects for the ECA region have suffered since the outset of the financial crisis. Emerging Europe and Central Asia has been hit harder than any other part of the developing world by the crisis. First, with the onset of the crisis, fiscal balance deteriorated more in ECA than any other region in the world. ECA’s fiscal balance, which had an average surplus of +2.0 percent of the GDP from 2005-08, deteriorated to -6.0 percent of the GDP in 2009 (see Figure IV-1). Second, economic growth rates also declined most sharply in ECA. Prior to the crisis, ECA had the highest growth in the world except for Developing Asia (Asia excluding Japan). While Developing Asia’s growth rate fell from 8.0 to 6.0 percent during the crisis, growth rates in Europe and Central Asia fell from 6.0 percent to -6.0 percent (see Figure IV-2).

Going forward, the World Economic Outlook (2010) estimates that economic growth in the region is likely to be relatively sluggish at below 4.0 percent annually between 2010-13 (Figure IV-2), and consequently, fiscal balances are projected to remain in negative territory at -3.0 percent of the GDP (Figure IV-1). A slow recovery in ECA—and hence lower tax receipts and higher spending on ‘automatic stabilizers’ such as unemployment benefits—also means that ‘fiscal space’ available for capital and recurrent expenditure in infrastructure in ECA Region will remain constrained between 2010-13. As a result, countries in ECA Region will have to find creative fiscal solutions to fund the massive investments needed for infrastructure rehabilitation and new project delivery. The following discussion will trace the evolution of fiscal prospects and ‘fiscal space’ in the region before the crisis and during the crisis. The discussion on fiscal evolution in the Region will then move to infrastructure spending and the shifting context for PPPs.
Before the Crisis—Expanding Fiscal Horizons in a ‘Rising Tide’ Environment

During 2000–07, ECA enjoyed sustained economic expansion, growing at an annual average of 6.0 percent. From a fiscal perspective, this was the ‘rising tide that raised all boats’ in ECA—revenues rose and fiscal balances improved. For example, revenues, as a share of GDP, rose steadily across the region and most sharply in oil exporting CIS countries, growing from 21 percent of GDP in 2000 to just over 30 percent of GDP in 2007 (see Figure IV-3). In S.E. Europe and Turkey revenues grew from 34 percent of GDP in 2000 to about 42 percent in 2007. Tax revenues doubled in nearly every country. Consequently, annual revenue collections increased by more than US$1000 per capita per year in the region. This translated into a US$500 billion additional income providing an expanding ‘fiscal space’ across the region.

Figure IV-3: General Government Revenue, 2000-07 (% of GDP)

Source: Office of the Vice President of the ECA Region, World Bank (2010) – Post-Crisis Strategy for ECA.
Despite growing revenues across the Region, IMF Government Finance Statistics (GFS) indicate that general government spending—as a percentage of GDP—actually declined in the EU-10, S.E. Europe, and Turkey during 2000-07. Public spending as percentage of GDP grew moderately in the CIS during this period (see Figure IV-4). Since GDP was growing quickly in the region, the absolute (rather than percent of GDP) spending did increase in the region from US$700 billion in 2000 to over US$1.1 trillion in 2007. These US$400 billion worth of additional fiscal resources were not spent uniformly across the region. Bolstered by historically high oil prices, energy exporters were profligate with their additional revenues, whereas Central and Southern Europe increased spending only moderately.

**Figure IV-4: General Government Spending, 2000-07 (% of GDP)**

**During 2000-07, fiscal balances improved considerably across ECA.** Revenues as a share of GDP rose appreciably but public spending remained steady or declined. For example, S.E. Europe and Turkey saw a robust fiscal balance of +9.0 percent; EU-10 and CIS also improved their fiscal balances (see Figure IV-5). Encouragingly, the improving fiscal balances across the region can be attributed largely to public sector management and institutional improvements across the region, according to World Bank Annual “Country Policy and Institutional Assessment (CPIA)” scores for the region.

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46Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, and Slovenia.

47The World Bank completes an annual Country Policy and Institutional Assessment for all borrowing countries; the CPIA rates countries against a set of 16 criteria grouped in four clusters: (a) economic management; (b) structural policies; (c) policies for social inclusion and equity; and (d) public sector management and institutions.
ECA Countries’ Fiscal Responses during the Crisis

*During the financial crisis (2008–09) earlier positive fiscal trends began to reverse.*

*After the onset of the crisis,* GDP across the region declined sharply, tax receipts fell, and expenditures increased on social safety nets such as unemployment benefits. Consequently, fiscal balances began to deteriorate region-wide, but the magnitude of fiscal deterioration began to diverge. For example, the EU-10 faced the largest deficits in the region—nearly -10 percent of the GDP due to an increase in the ratio of expenditures to falling GDP. One exception was Latvia, which cut spending significantly. In the Western Balkans and Turkey, the average deficit was 7.5 percent because of a fall in the ratio of revenues to GDP. The notable exception was Serbia, where expenditures as a share of GDP fell during the crisis. In the energy exporting countries, fiscal deficits averaged 5.0 percent. In Central Asia and the Caucasus, the fiscal deficit was about 7.0 percent of GDP, because of both a rise in the ratio of spending to GDP and a fall in the revenues to GDP (See Figure IV-6).

Fiscal responses also began to diverge among ECA countries. (See also Figure IV-6) Countries that implemented sizeable fiscal stimulus programs had sizeable foreign exchange reserves—such as Kazakhstan, Azerbaijan and Uzbekistan. Some energy exporters had fiscal deficits up to 6.0 percent of GDP. Other CIS countries carried out modest stimulus programs. South-Eastern Europe actually tightened its finances during the crisis. Figure IV-6 also illustrates that automatic stabilizers, such as unemployment insurance, falling tax receipts, and progressive tax systems kicked in across the region (illustrated by the darker bars in the Figure).
‘Fiscal Space’ and Fiscal Prospects in ECA

Discretionary fiscal policies in response to the crisis have varied considerably across the region because ‘fiscal space’ also varied among ECA countries prior to the crisis. Fiscal space is government’s ability to increase expenditure or reduce taxes without impairing a sustainable financial position (see Heller 2005). Analytically, ‘fiscal space’ can be said to exist when the primary fiscal surplus is consistent with a stable public debt ratio over the long run (see Gray et al. 2007: 85 and Annex 3C for a methodology). Fiscal space can be created in the following ways: First, on the expenditure side, by (a) reallocating expenditures from low-value programs toward programs with a higher effect on growth or (b) improving the efficiency of public expenditures to get better value from programs. Second, on the financing side, fiscal space can be created by (a) broadening the tax base, (b) increasing tax rates, (c) mobilizing grant aid, or (d) mobilizing revenues from sale of natural resources. Third, high economic growth rates increase fiscal space as do discovery and export of natural resources or other foreign currency reserve building exports (see El-Erian and Spence 2008). Last, fiscal space can be created by accelerating the reduction of public debt—or using one-off revenues (such as privatization revenues) to pay back public debt—to reduce the primary fiscal surplus required for debt solvency.

A pre-crisis analysis of fiscal space in ECA conducted by Gray et al. (2007) identified four groups of countries within ECA:

1. Fiscal space seems to be available but public spending in growth-promoting sectors is below group average.
2. Fiscal space seems to be available but public spending in growth-promoting sectors is above average for the whole group.
3. Additional fiscal space needs to be created to ensure long-run solvency and public spending in growth-promoting areas is below group average.

4. Additional fiscal space needs to be created to ensure long-run solvency and public spending in these growth promoting areas is relatively oversized.

The 2007 estimates of fiscal space and the size of growth-promoting expenditures on capital investment and education are shown in Figure IV-7. Countries in the lower right quadrant had the most fiscal space and could increase spending; countries in the upper left quadrant had limited fiscal space.

**Figure IV-7: Fiscal Space in ECA Countries in 2007**

Since the crisis, fiscal space has changed in ECA countries. Precise data are still becoming available but a rapid shift in the primary balance meant that countries such as Estonia had less fiscal space during the crisis than Figure IV-7 may suggest. Similarly, countries such as Turkey that had aggressively paid down debts prior to the crisis and created substantial fiscal space, also saw it evaporate during the crisis because fiscal balances worsened when automatic stabilizers kicked in after the onset of the crisis. In many ECA countries, the large magnitude of automatic stabilizers is due to 10 percent of GDP going to social expenditures, creating a social benefit system that emulates developed country patterns (See Figure IV-8). Substantial social spending in ECA affects infrastructure spending, “crowding out” fiscal resources in the region that could be made available for infrastructure (see Figure IV-11).
Since the crisis, fiscal space in ECA has been extremely constrained, especially for EU countries. Countries such as Turkey and many of the EU-27 countries have limited fiscal space to finance new investments in infrastructure. Among EU-10 and EU-27 countries, room for investment spending is particularly constrained by strict Maastricht treaty guidelines on fiscal deficits, except for Poland (EU-27), whose fiscal situation is less dramatic but still somewhat constrained.
ECA’s overall fiscal context has immense implications for infrastructure spending in the Region. What are the trends in public spending on infrastructure across time and across countries? How has infrastructure spending been impacted by the crisis? These important questions are difficult to answer for the entire region because of the lack of quality data on public infrastructure finance (recurrent and investment expenditure) (Kessides and Khan 2007:110). However, reliable sources such as the IMF Government Finance Statistics (GFS), collect data on ‘public expenditure on capital investments,’ which is used as a proxy for infrastructure investment in this section.

Across ECA, infrastructure spending has been low; maintenance and rehabilitation needs are substantial. Despite a massive stock of infrastructure, the last decades in the Region saw limited spending and subsequently deteriorating infrastructure assets and services. Even before the crisis, the level of infrastructure investments needed in ECA was considered substantial as noted in a 2006 World Bank study, “During 2005-2010, the ECA Region may have to invest nearly 7.0 percent of GDP annually to rehabilitate, operate, and maintain infrastructure services at a level and quality needed to sustain targeted economic growth.” Despite positive fiscal prospects during 2005-07, this infrastructure investment target was not met; thus the imperative for infrastructure investment has intensified. For example, the 2008 BEEPS survey shows that ECA Region private enterprises increasingly consider infrastructure, and particularly energy, a major bottleneck. Despite the crisis, numbers have spiked since 2005 among enterprises that consider electricity to be an obstacle to doing business (Figure IV-9).

Figure IV-9: Percentage of Firms Indicating that Electricity is Some Form of Constraint to Business in ECA

Infrastructure quality affects productivity; increased infrastructure investment is vital in ECA, which has lagged behind other developing regions, particularly EAP. (Calderon and Serven 2004; World Bank 2006). The poor quality of infrastructure stock contributes to inefficient infrastructure use. For example, in the ECA Region, energy intensity is 0.70 tons of oil equivalent per US$1,000 of GDP, far above the EU at 0.13. Considerable new investment will be required in the coming years. Assuming an annual economic growth rate of 4.5 percent in ECA, the World Bank estimates the investment needs of the electricity sector alone at about US$ 1.5 trillion over the next two decades, or 1.0 to 1.5 percent of ECA’s annual GDP. Similarly, a 2003 European Union study estimated that long-term investment needs for the core road network in the SEE countries alone will be around €4.0 billion. Another €12 billion will be required for core railway network (REBIS Transport 2003). Few countries in CEE/SEE are investing at these levels; for example, in the road sector, actual expenditures are below 2.0 percent of GDP in all CEE/SEE countries.

Despite the pressing need, the share of public expenditure for capital investment in ECA has lagged other regions (World Bank 2006). This shortfall occurs despite the average size of ECA Region governments, which are larger than those of most other developing countries. However, this is because most public spending in the Region goes to the social sector. The highest public capital investment in infrastructure takes place in EU-10 countries (Figure IV-10 and Table IV-1). High social sector spending has the effect of ‘crowding out’ public investment in infrastructure, which reduces the scope for infrastructure spending; particularly in the context of limited fiscal space that the Region faces in coming years.

Figure IV-10: Economic Classification of Government Expenditures, 2008


As also seen above in Figure 9, spending on Social Assistance and Insurance, as percentage of GDP, in ECA is so high as to be comparable to OECD countries.
2007 World Bank Research corroborates the finding that infrastructure spending averages are lower in countries with large expenditures for core government functions, social security, and welfare (see Figure IV-11). In these countries, capital expenditures are lower by about 1.5–2.5 percent of total general government expenditures—equivalent to 0.7–1.1 percent of GDP for each expenditure category.

Figure IV-11: High Social Spending Crowds Out Spending on Infrastructure in ECA

Expenditure Allocations in ECA Countries, Average, 2002–04

Public capital investments have declined in ECA countries since the financial crisis. For example, capital investment in Turkey was 10.6 percent of GDP in 2009 and 13.9 percent of GDP in 2008, i.e., a decline of -3.3 percent. In Poland, capital investment was 6.8 percent of GDP in 2009 and 4.9 percent of the GDP in 2008, an increase of 1.9 percent (see Table IV-1 at the end of this Annex for data across ECA). These trends are reflected in Map IV-1. Only a few countries, such as Poland or Lithuania, experienced an appreciable increase in capital investment during the crisis. Most countries experienced a decline; the sharpest declines were in Turkey, Ukraine, and Latvia.
Map IV-1: Difference in Level of Capital Expenditure - 2008 to 2009 (% of GDP)

Map IV-2 extends the analysis of Map IV-1 by subtracting the ratio of capital expenditure as a total of government spending in 2008 from the same ratio in 2009. Countries with relative declines of less than -1.0 percent are in orange. Many countries in ECA cut capital expenditure as a ratio of total government spending between 2008 and 2009—a point that underpins the paucity of fiscal space available for infrastructure in the region.

Map IV-2: Relative Change in Capital Spending as a Percent of Government Spending 2008 to 2009
Tight fiscal constraints in ECA make it essential to find new sources of infrastructure financing. Mobilizing private finance in infrastructure is crucial (Noel and Brzeski 2005). Even before the crisis, despite the desirability of increased private sector investment in infrastructure, private-only investment was difficult to find. For example, Eurostat estimates that only 10 percent of transport spending in Poland in 2008 was from corporate sources and the rest came from public sources—the lowest in the EU (see Valiää 2010). Similarly, private sector invested only US$36 billion in the electricity sector in ECA between 1998 and 2007 (in 2007 prices; or 1.1 percent of Regional GDP; World Bank 2010). Private investment is also highly skewed among ECA countries. The Russian Federation, EU-10, and Turkey accounted for 86 percent of total private activity during 2003-07. Indeed, the privatization of just two wholesale generation companies in the Russian Federation in 2007 accounted for 38 percent of total private investment in ECA’s electricity sector during 2003-07. To accelerate private capital flows in coming years, strategies such as well-designed PPPs are essential to move forward.

Table IV-1: Trends in Capital Expenditure (% of GDP) in ECA 2000-01

<table>
<thead>
<tr>
<th>Country</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
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<th>2007</th>
<th>2008</th>
<th>2009</th>
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<tbody>
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<td>7.38</td>
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</tr>
<tr>
<td>Lithuania</td>
<td>2.27</td>
<td>3.98</td>
<td>4.18</td>
<td>4.53</td>
<td>4.54</td>
<td>3.30</td>
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<td>5.20</td>
<td>5.00</td>
<td>6.60</td>
<td>6.90</td>
</tr>
<tr>
<td>Macedonia, FYR</td>
<td>2.68</td>
<td>3.47</td>
<td>3.62</td>
<td>4.07</td>
<td>3.15</td>
<td>4.00</td>
<td>3.90</td>
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<td></td>
</tr>
<tr>
<td>Moldova</td>
<td>3.87</td>
<td>2.47</td>
<td>3.21</td>
<td>3.04</td>
<td>3.81</td>
<td></td>
<td></td>
<td>7.50</td>
<td>7.00</td>
<td>5.30</td>
<td>6.10</td>
</tr>
<tr>
<td>Montenegro</td>
<td>7.67</td>
<td>5.40</td>
<td>6.70</td>
<td>6.70</td>
<td>10.70</td>
<td></td>
<td></td>
<td>10.70</td>
<td>10.70</td>
<td>10.10</td>
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</tr>
<tr>
<td>Poland</td>
<td>2.82</td>
<td>3.04</td>
<td>2.85</td>
<td>2.72</td>
<td>3.41</td>
<td>3.30</td>
<td>3.00</td>
<td>3.90</td>
<td>4.90</td>
<td>6.80</td>
<td>7.70</td>
</tr>
<tr>
<td>Romania</td>
<td>3.05</td>
<td>3.13</td>
<td>3.23</td>
<td>3.48</td>
<td>3.26</td>
<td>3.00</td>
<td>4.30</td>
<td>4.80</td>
<td>4.70</td>
<td>4.30</td>
<td>3.80</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>5.15</td>
<td>5.20</td>
<td>5.56</td>
<td>5.33</td>
<td>4.84</td>
<td></td>
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</tr>
<tr>
<td>Serbia</td>
<td>2.86</td>
<td>1.42</td>
<td>3.40</td>
<td>2.47</td>
<td>2.60</td>
<td>2.67</td>
<td>4.06</td>
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<td>3.70</td>
<td>3.10</td>
<td>3.40</td>
</tr>
<tr>
<td>Slovak Republic</td>
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<td>5.38</td>
<td>5.22</td>
<td>3.47</td>
<td>3.90</td>
<td>4.10</td>
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<td>4.40</td>
<td>4.70</td>
<td>4.80</td>
<td></td>
</tr>
<tr>
<td>Slovenia</td>
<td>4.73</td>
<td>4.83</td>
<td>4.67</td>
<td>4.97</td>
<td>4.63</td>
<td>3.60</td>
<td>4.20</td>
<td>4.20</td>
<td>4.60</td>
<td>5.00</td>
<td>4.90</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>6.64</td>
<td>5.03</td>
<td>5.36</td>
<td>6.52</td>
<td>8.12</td>
<td>6.80</td>
<td>14.10</td>
<td>13.90</td>
<td>10.60</td>
<td>9.30</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>1.58</td>
<td>1.22</td>
<td>1.05</td>
<td>0.61</td>
<td>0.71</td>
<td>1.60</td>
<td>1.60</td>
<td>1.50</td>
<td>1.50</td>
<td></td>
<td></td>
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<tr>
<td>Turkmenistan</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Ukraine</td>
<td>3.02</td>
<td>3.06</td>
<td>4.31</td>
<td>5.97</td>
<td>5.40</td>
<td>5.60</td>
<td>4.10</td>
<td>4.50</td>
<td></td>
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</tr>
</tbody>
</table>

* Forecast

Sources: GFS, IMF.
ANNEX 5
SURVEY INSTRUMENT
**Introduction to the Survey**

Since the onset of the current global financial crisis, raising public and private long-term investment for PPP in highway projects has been difficult. The World Bank decided to assess a considerable array of information on the performance of planned infrastructure projects during the crisis, to produce a report on how successful, stable, long-term PPP Highway projects can be funded and developed during the financial crisis. Funding was provided by World Bank/PPIAF.

The information sought for the report includes the following: (1) experience of major players in the PPP highway sector project business active in the current situation; (2) opinions on key issues involved in project success; and (3) areas for potential mitigation of crisis effects that would contribute to successful development and implementation of PPP Highways Projects.

Review results will help formulate recommendations for current and future PPP highway projects in ECA region. In addition, the report will draw on international industry experience and ‘best practice’ advice from sector decision makers and professionals worldwide.

**Questionnaire:** The attached questionnaire explores issues likely to determine highway development effectiveness:

1. Questions on general situation
2. Position on long-term investment/strategy/market conditions
3. Financial issues and availability of funds
4. Legal and regulatory issues
5. Improving success of highway PPP projects

Since it is impossible to prepare detailed questions in advance that are specific to all situations, respondents are requested to provide the best possible answers in spite of lacking exact information or details.

The questionnaire includes a form for a brief outline of existing or proposed PPP highway projects (Project Pipeline) or phases.
Q1 General
1.1 Compared to pre-crisis levels, what is seen to be effect of crisis on potential Highway PPP project pipeline? What examples? [See the detailed country/project questionnaire as well]

1.2 What forms of PPP have been used?

Which appear to have had most success?

Which have failed?

Q2 Public Sector Strategy & Issues
2.1 CONSTRAINTS ON INVESTMENT: How have constraints on Transport Sector investment changed?

<table>
<thead>
<tr>
<th>Before Crisis 2006</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport Sector Budget</td>
<td></td>
</tr>
</tbody>
</table>

2.2 CHANGING STRATEGIES: How are Government Highway Strategies changing with the Crisis? How are Governments planning to fund? What role does the private sector play? How is this evolving?

2.1 Planned Investment for 2009 & 2010

<table>
<thead>
<tr>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned Investment</td>
<td></td>
</tr>
</tbody>
</table>
2.2 **ROLE OF PRIVATE SECTOR**: What is the role of Private Sector in funding?

<table>
<thead>
<tr>
<th>Planned Funding %</th>
<th>Before Crisis</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.3 **EFFECT ON SECTOR INCOME & BUDGET** What is the effect of the crisis on Sector Income & public Budget? What magnitude of reduction/change? Has the Budget been re-assessed, and if so how many times?

2.4 **WHAT EFFECT ON SOURCES OF INCOME**: What income sources are used to fund sector and if they have been increased/decreased?

<table>
<thead>
<tr>
<th>Examples:</th>
<th>Before Crisis</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Tax?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle Tax?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tolls?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (e.g. Road Fund)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Budget Allocation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.5 **CHANGE IN STRATEGY:** How is Public Strategy for Highway Sector development changing? (e.g. new construction/rehabilitation upgrade/operation and maintenance?)

<table>
<thead>
<tr>
<th></th>
<th>Before Crisis</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Highway construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rehabilitation/upgrade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation and maintenance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.6 **PPP UNITS:** Is there specific PPP development support or capacity for the Highways Sector (e.g., PPP unit or other approach?)

2.7 **COMPETITION:** Do you find that market competition for PPP Highways contracts is changing, and how?

<table>
<thead>
<tr>
<th></th>
<th>Before Crisis</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Bidder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size of Bidder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Origin</td>
<td></td>
<td></td>
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</tbody>
</table>

2.8 **RISKS/RISK LEVELS:** What do you see as the key risks and risk levels in the current situation? How has it changed? [Possibly examples by project]. What changes have there been between Public & Private Risk sharing?

<table>
<thead>
<tr>
<th></th>
<th>Before Crisis</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market Risk</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Funding

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.9 **IMPACT & RISK ALLOCATION ON EXISTING PROJECTS**: How are existing projects impacted by the crisis? In particular, what the risk allocation was used? (especially demand risk)

2.10 **WHAT ARE GOVERNMENTS WILLING TO DO TO REACH FINANCIAL CLOSE?**: Looking at the how risks are shared between Public and Private sector what are the top two or three issues that seem to make or break a PPP arrangement? Have the importance of these changed with the crisis? What is Government asking the Private Sector to do? (Project closure issues below illustrate some examples. Please write in other actual issues.)

<table>
<thead>
<tr>
<th>Key Closure Issues: [Examples]</th>
<th>How have these changed with crisis?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who takes Demand Risk</td>
<td></td>
</tr>
<tr>
<td>Financial Guarantees</td>
<td></td>
</tr>
<tr>
<td>Levels of Return expected</td>
<td></td>
</tr>
<tr>
<td>Levels of Government Subsidy</td>
<td></td>
</tr>
</tbody>
</table>
Q3. Financial Issues & Availability of Funds:

3.1 GOVERNMENT INVESTMENT: How do you see the effect of the crisis on the capacity of Government or implementing organizations for infrastructure investment and particularly PPP in Highways?

3.2 AVAILABILITY OF FUNDS: How has availability and cost of funds changed (public and private)? For example limits on public borrowing; or private sector seeking an increased return on equity

<table>
<thead>
<tr>
<th>Availability of Funds</th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
</table>

3.3 PUBLIC EQUITY INVESTMENT? What is the position on public equity investment in PPP Highway schemes?

<table>
<thead>
<tr>
<th>Position on public equity investment</th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
</table>

3.4 IMPACT ON PUBLIC SECTOR CONTRIBUTIONS: On existing projects with public sector contributions, what are the impacts on payments? (e.g. Do they pay more? For example, due to decrease in traffic and minimum revenue guarantee?)

<table>
<thead>
<tr>
<th>Project</th>
<th>Impact on payment with crisis</th>
</tr>
</thead>
</table>

3.5 FUNDING MECHANISMS: Have any dedicated funding mechanisms been created? (Examples; investment fund, guarantee funds) or are there “off-budget” mechanisms? Is there increased borrowing because of the crisis?

3.6 RELATIONSHIPS: How is the relationship between banks/investors/ government changing?

3.7 DEALING WITH RISK: What is the change in position of public organizations to dealing with risk: have systems related to risk evaluation/acceptance levels changed? For example, have the acceptable financial ratios changed? e.g., debt/equity ratio; principal/interest cover ratio?
**Q4 Legal/regulatory issues:**

4.1 What influence has the legal/regulatory framework have on success or otherwise of PPP projects?

4.2 Do you see EU ‘negotiated procedures’ for procurement have helped to improve individual project bankability, rather than traditional approaches in the sector/region?

4.3 Are EU requirements (if applicable) and accounting rules (Eurostat) limiting your scope in finding a solution with Government (explain how)?

4.4 How are PPP projects monitored in the long term? Is there a dedicated PPP monitoring entity? What is the situation on availability of information provided by the Private Sector?
Q5 Improving success of Highway PPP projects:

5.1 FACTORS FOR IMPROVEMENT: From the government point of view what factors would have/have had the greatest effect on improving highway PPP start-ups and successful implementation that we have talked about? What are go/no go issues?

<table>
<thead>
<tr>
<th>Short Term</th>
<th>Medium/Long Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some examples/suggestions— not exclusive:</td>
<td></td>
</tr>
<tr>
<td>• Risk sharing mechanism between Private &amp; Public Sector, and levels of risk assumed by each party.</td>
<td></td>
</tr>
<tr>
<td>• Type of PPP Structure</td>
<td></td>
</tr>
<tr>
<td>• Guarantees/security instruments</td>
<td></td>
</tr>
<tr>
<td>• Improved mechanisms for financial support from Public Sector</td>
<td></td>
</tr>
<tr>
<td>• Improved project definition?</td>
<td></td>
</tr>
<tr>
<td>• Procurement</td>
<td></td>
</tr>
</tbody>
</table>

5.2 IF MORE GOVERNMENT SUPPORT: What would industry/investors be willing to do if Government is ready to give more support?

Examples: Refinancing after x years? Revenue sharing mechanisms if above a level, reimburse the additional amount, etc?

5.3 WHAT WILL HAPPEN MEDIUM TERM? What is your perspective on how the crisis has impacted PPP in the medium term, i.e., when the crisis is over, what are the things that will change forever?

5.4 ADVICE ON NEW PROJECTS: How should government prepare new projects now (i.e., those not yet in bidding phase)?
## Overview of State of Sector:

<table>
<thead>
<tr>
<th>Country/Region:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of km of national highway:</td>
</tr>
<tr>
<td>Road Condition (% of total highway):</td>
</tr>
<tr>
<td>Good %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Investment needs and spending ($Million Euro):</th>
</tr>
</thead>
<tbody>
<tr>
<td>new construction</td>
</tr>
</tbody>
</table>

### 1. Budget (past 3, next 2 years):
- 2007
- 2008
- 2009
- 2010

### 2. Assessment of Investment needs
Investment needs for next 5 years
### Overview of State of Sector:

(Individual Project details: 2006 to Current)

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Description:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3.1 Km

### 3.2 Size
- (euro million)
- No. of phases and size of each phase
- Duration of Contract

### 3.3 Timetable
(actual or planned):
- bidding date,
- financial close
- operations start

### 3.4 Current Stage of project?
- concept (no feasibility phase)
- feasibility study
- procurement phase (no negotiations)
- negotiation
- construction
- operations

### 3.5 What type of project?
- New Construction
- Upgrade/Rehab
- Maintenance and Operation
### 3.6 What are the key characteristics of the PPP arrangement? (brief):
- PPP Model:
  - type of funding structure
  - public/private roles
    - Construction?
    - Operation?
    - Maintenance?
    - Rehabilitation?
  - Other

### 3.7 Public/Private Funding values
- Financial contribution
- How much Debt/Equity?
- Is Return on Equity stated/requested?

### 3.8 What are the direct sources of revenue for the project?
- Actual toll
- Shadow toll
- Availability payment
- Capital grant from government
- Other?
### 3.9 What are Main Risk sharing issues?

- Construction risk
- Revenue risk  
  [If shared, please explain (e.g., Shadow tolls):
- Inflation risk  
  (including Indexation of availability payments and tolls)
- Foreign exchange
- Other

Are any guarantees provided by the State?

<table>
<thead>
<tr>
<th>3.10 What are the direct sources of revenue for the project?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Actual toll</td>
</tr>
<tr>
<td>- Shadow toll</td>
</tr>
<tr>
<td>- Availability payment</td>
</tr>
<tr>
<td>- Capital grant from government</td>
</tr>
<tr>
<td>- Other?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.11 What is the Procurement Approach:</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g., Bidding or Negotiation (and why?)</td>
</tr>
</tbody>
</table>
### 3.12 How are projects monitored?

Examples:
- method of monitoring,
- monitoring entity,
- what access to data available from private sector

### 3.13 General comments

(e.g., “abandoned after negotiation failure”; renegotiation with reasons; reverting to public sector etc)

### 3.14 What 2 or 3 issues illustrate the potential success or failure of this PPP Highways project?

- 
- 
- 

### 3.15 What lessons can be learnt from this project for more successful future PPP Highway Projects?

---

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key PPP Characteristics continued</td>
<td></td>
<td></td>
<td></td>
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</tbody>
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