

# **Fiscal Policy and Public Investment in New EU Member States**

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## I. INTRODUCTION

**Fiscal policy in the New EU Member States (NMS) faces a challenging dilemma.**<sup>3</sup> On the one hand, fiscal policy must support growth and convergence by allowing increased levels of investment, not least to upgrade infrastructure. On the other hand, fiscal policy must fulfill the budget requirements of the EU Growth and Stability Pact (SGP), while facing additional expenditure needs for complying with the European laws and standards (the so called *Acquis Communautaire*).<sup>4</sup> These standards call for reforms in the labor market, the tax and pension systems, subsidy schemes, and other areas, which may entail up-front costs. In addition, many countries must prepare to buffer the impact of increasing expenditure pressures related to an aging population within a sustainable medium-term macro-fiscal framework.

**To varying degrees, many NMS have carried out fiscal adjustment in recent years, with implications for the level of public investment.** Although a large part of this adjustment has fallen upon public expenditures, including public investment, reductions in domestic funding for public investment have, to some extent, been counterbalanced by the availability of new financing support. Part of this financing has been provided by EU funds that have been directed toward projects with a regional impact and of common European interest. In addition, many countries are advancing the implementation of public-private partnerships (PPPs) as an alternative to traditional public investment to develop infrastructure.

**Against this background, this paper looks at fiscal adjustment and public investment issues in NMS, and the role of EU support and PPPs to develop infrastructure.** In particular, the paper aims to address three specific issues:

- First, what does the evidence suggest regarding the impact of fiscal adjustment on public investment levels?
- Second, where do NMS stand with respect to infrastructure indicators and what could be the role of EU funds in providing resources for needed investment?
- Third, how could NMS improve the institutional environment for PPPs to capitalize on efficiency gains and manage fiscal risks in an effective way?

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<sup>3</sup> For the purpose of this study, NMS includes the countries that became members of the EU in May, 2004, plus Bulgaria and Romania that became members in early 2007. The paper also discusses a few useful experiences from non-EU members in Section IV.

<sup>4</sup> This term denotes the treaties, regulations and directives passed by the European institutions as well as judgments laid down by the Court of Justice. Candidate countries must adopt, implement and enforce all the *acquis* to be allowed to join the EU. As well as changing national laws, this often means they must set up or change the necessary administrative or judicial bodies which oversee the legislation. The “chapters” include free movement of goods, services, persons, capital, company law, competition, transport, energy, research, industrial policy, education, energy, ITC, environment, culture, consumers and health protection as well as cooperation in the field of justice, customs, foreign and security policy, and financial and budgetary provisions.

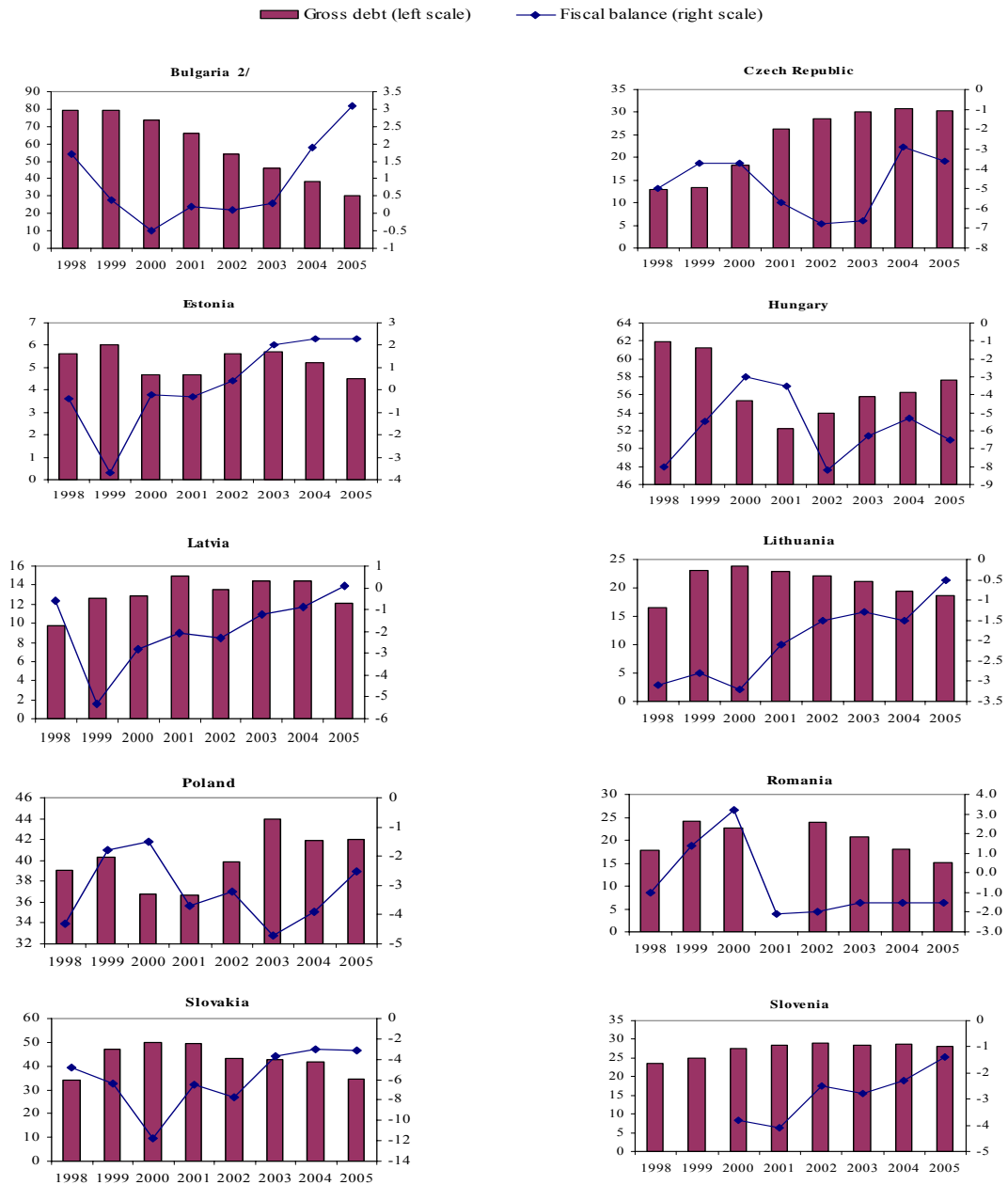
**NMS face important challenges to upgrade infrastructure.** The paper suggests that the experience with fiscal adjustment and public investment has been fairly mixed. Some countries have resorted to investment cuts to consolidate fiscal positions, while others have been more successful in both accommodating higher levels of investments and reducing fiscal imbalances. Still, to support growth and development, additional investment is needed across the region, particularly in productive infrastructure, even in a context of tight budgets. In this regard, new available financing presents both opportunities and challenges, requiring improvements in the institutional framework for investment and PPPs. In the case of EU funds, absorbing the substantial additional resources under the new financial perspective will demand important efforts to reallocate expenditures and to step up absorptive capacity. Similarly, while PPPs provide a promising route for channeling more resources into infrastructure investment, strengthening the institutional framework for PPPs and limiting incentives to simply move investment off budget is crucial to deliver on the expected benefits and manage the fiscal risks that come from private participation in infrastructure.

**The rest of the paper is organized as follows.** Section II reviews fiscal developments in NMS and the role of public investment in fiscal adjustment episodes. Section III discusses the state of infrastructure in NMS, investment requirements to develop infrastructure to levels in more advanced countries, and the role of EU support in this context. Section IV analyzes PPPs and their potential contribution to increasing infrastructure investment and enhancing efficiency gains. Section V concludes.

## **II. FISCAL ADJUSTMENT AND PUBLIC INVESTMENT IN NEW MEMBER STATES**

**Fiscal outcomes in the NMS have varied significantly in recent years, with some countries implementing sizable fiscal adjustment.** Fiscal balances in all countries displayed considerable vulnerability to the large recession that followed the Asian crisis in 1997. However, developments have differed substantially since the early 2000s. The Baltic countries made significant progress in reducing their fiscal deficit between 1999 and 2005. For instance, Estonia and Latvia were exceptional in registering a budget surplus in 2005. In contrast, the Central and Eastern European countries (CEEs) have shown more inertia in their (largely negative) budgetary positions. In particular, Hungary stands out as the NMS with the largest fiscal imbalances measured by both fiscal deficit and public debt levels, followed by Poland. Other CEEs have been able to bring deficit levels and debt levels to below the reference value under the SGP. Of the most recent NMS, Bulgaria achieved strong fiscal outcomes over the last few years, while Romania posted fiscal deficits but comparably lower debt levels. (Figure 1).

Figure 1: Fiscal Balance and Government Debt in NMS  
(in percent of GDP)



Source: Eurostat (2007).

1/ Data are based on the European System of Accounts 1995. Gross debt are for the general government level, and fiscal balance are net borrowing/lending of the general government.

2/ Data for 2002-05 are missing for fiscal balance, and are filled with the Eurostat series on net borrowing/lending with Excessive Deficit Procedure.

Table 1. General Government Revenue, Expenditure, Fiscal Balance, and Debt in NMS  
(in percent of GDP)

Country	Fiscal indicator	1998	1999	2000	2001	2002	2003	2004	2005
Czech Republic	Total revenue	38.2	38.6	38.1	38.7	39.5	40.7	41.5	40.4
	Public investment 2/	4.2	3.3	3.6	3.5	3.9	4.5	4.9	5
	Other expenditure 3/	39	39	38.2	41	42.4	42.8	39.5	39.1
	Fiscal balance 4/	-5	-3.7	-3.7	-5.7	-6.8	-6.6	-2.9	-3.6
	Gross debt	12.9	13.4	18.2	26.3	28.5	30.1	30.7	30.4
Estonia	Total revenue	39.1	39.1	36.2	34.7	36	37.4	36.6	35.5
	Public investment 2/	4.7	4.2	3.8	4.1	4.9	4.2	3.1	3.2
	Other expenditure 3/	34.8	38.6	32.7	31	30.7	31.1	31.1	30
	Fiscal balance 4/	-0.4	-3.7	-0.2	-0.3	0.4	2	2.3	2.3
	Gross debt	5.6	6	4.7	4.7	5.6	5.7	5.2	4.5
Hungary	Total revenue	44.7	44.4	43.6	44	43	42.8	43.5	43.4
	Public investment 2/	3.2	2.9	3.2	3.7	4.9	3.4	3.5	4
	Other expenditure 3/	49.5	47	43.3	43.7	46.3	45.7	45.3	45.9
	Fiscal balance 4/	-8	-5.5	-3	-3.5	-8.2	-6.3	-5.3	-6.5
	Gross debt	61.9	61.2	55.4	52.2	54	55.8	56.3	57.7
Latvia	Total revenue	40	36.6	34.6	32.5	33.4	33.5	34.9	36.2
	Public investment 2/	1.4	1.5	1.3	1.1	1.3	1.5	1.9	2.3
	Other expenditure 3/	39.2	40.5	36	33.5	34.3	33.1	33.9	33.7
	Fiscal balance 4/	-0.6	-5.3	-2.8	-2.1	-2.3	-1.2	-0.9	0.1
	Gross debt	9.8	12.6	12.9	15	13.5	14.4	14.5	12.1
Lithuania	Total revenue	37.4	37.3	35.9	33.2	32.9	31.9	31.8	33
	Public investment 2/	2.5	2.6	2.4	2.2	2.9	3	3.4	3.5
	Other expenditure 3/	37.9	37.5	36.7	33	31.5	30.2	29.9	30.1
	Fiscal balance 4/	-3.1	-2.8	-3.2	-2.1	-1.5	-1.3	-1.5	-0.5
	Gross debt	16.5	23	23.8	22.9	22.2	21.2	19.4	18.7
Poland	Total revenue	40.1	40.8	39.6	40.1	41	39.9	38.7	40.9
	Public investment 2/	3.9	3.5	2.4	3.4	3.4	3.3	3.4	3.4
	Other expenditure 3/	40.4	39.2	38.7	40.4	40.8	41.3	39.2	39.9
	Fiscal balance 4/	-4.3	-1.8	-1.5	-3.7	-3.2	-4.7	-3.9	-2.5
	Gross debt	39.1	40.3	36.8	36.7	39.8	43.9	41.9	42
Romania	Total revenue	44.2	48	43.8	36.7	37.6	36.5	36.8	36.8
	Public investment 2/	1.9	2.1	1.9	2.4	3.1	3.2	3	2.9
	Other expenditure 3/	43.3	44.5	38.7	36.4	36.5	34.9	35.3	35.3
	Fiscal balance 4/	-1	1.4	3.2	-2.1	-2	-1.5	-1.5	-1.5
	Gross debt	17.8	24.2	22.7	..	23.8	20.7	18	15.2
Slovakia	Total revenue	40.5	40.8	39.8	36.8	35.7	35.6	35.9	33.9
	Public investment 2/	3.9	2.9	2.8	3.1	3.2	2.6	2.4	2.1
	Other expenditure 3/	41.4	44.3	48.9	40.2	40.1	36.8	36.5	35
	Fiscal balance 4/	-4.8	-6.4	-11.8	-6.5	-7.7	-3.7	-3	-3.1
	Gross debt	34	47.2	49.9	49.2	43.3	42.7	41.6	34.5
Slovenia	Total revenue	..	..	44.3	44.8	45.5	45.3	45.1	45.8
	Public investment 2/	..	..	3.1	3.1	3	3.3	3.5	3.6
	Other expenditure 3/	..	..	45	45.8	45	44.7	43.9	43.6
	Fiscal balance 4/	..	..	-3.8	-4.1	-2.5	-2.8	-2.3	-1.4
	Gross debt	23.6	24.9	27.4	28.4	29.1	28.5	28.7	28

Source: Eurostat (2007).

1/ Data are based on statistics for the general government level as defined in the European System of Accounts (ESA)1995. ".." indicates that data are not available.

2/ Data refer to public gross fixed capital formation.

3/ Data refer to total expenditure excluding public investment.

4/ Data refer to net borrowing/lending.

Table 2. Fiscal Adjustment and Public Investment in NMS  
( in percent of GDP)

	Years with higher fiscal balance	Changes in overall balance 2/	Changes in total revenue	Changes in public investment 3/	Changes in other expenditure 4/
Czech Rep.	1999	1.3	0.4	-0.9	0
	2003	0.2	1.2	0.6	0.4
	2004	3.7	0.8	0.4	-3.3
	Average	1.7	0.8	0.0	-1.0
Estonia	2000	3.4	-2.9	-0.4	-5.9
	2002	0.8	1.3	0.8	-0.3
	2003	1.7	1.4	-0.7	0.4
	2004	0.3	-0.8	-1.1	0
Average	1.6	-0.2	-0.4	-1.5	
Hungary	1999	2.5	-0.3	-0.3	-2.5
	2000	2.6	-0.8	0.3	-3.7
	2003	1.9	-0.2	-1.5	-0.6
	2004	1	0.7	0.1	-0.4
Average	2.0	-0.2	-0.4	-1.8	
Latvia	2000	2.7	-2	-0.2	-4.5
	2001	0.6	-2.1	-0.2	-2.5
	2003	1.1	0.1	0.2	-1.2
	2004	0.2	1.4	0.4	0.8
2005	1.1	1.3	0.4	-0.2	
Average	1.1	-0.3	0.1	-1.5	
Lithuania	1999	0.2	-0.1	0.1	-0.4
	2001	1.2	-2.7	-0.2	-3.7
	2002	0.5	-0.3	0.7	-1.5
	2003	0.2	-1	0.1	-1.3
2005	0.9	1.2	0.1	0.2	
Average	0.6	-0.6	0.2	-1.3	
Poland	1999	2.3	0.7	-0.4	-1.2
	2000	0.4	-1.2	-1.1	-0.5
	2002	0.5	0.9	0	0.4
	2004	0.8	-1.2	0.1	-2.1
2005	1.5	2.2	0	0.7	
Average	1.1	0.3	-0.3	-0.5	
Romania	1999	2.4	3.8	0.2	1.2
	2000	1.8	-4.2	-0.2	-5.8
	2002	0.1	0.9	0.7	0.1
	2003	0.4	-1.1	0.1	-1.6
2004	0.1	0.3	-0.2	0.4	
2005	0.1	0	-0.1	0	
Average	0.8	-0.1	0.1	-1.0	
Slovakia	2001	5.4	-3	0.3	-8.7
	2003	3.8	-0.1	-0.6	-3.3
	2004	0.8	0.3	-0.2	-0.3
Average	3.3	-0.9	-0.2	-4.1	
Slovenia	2002	1.6	0.7	-0.1	-0.8
	2004	0.4	-0.2	0.2	-0.8
	2005	0.9	0.7	0.1	-0.3
Average	1.0	0.4	0.1	-0.6	

Source: Eurostat (2007).

1/ Data are based on statistics at the general government level as defined in ESA1995. Data on changes refer to differences between the current year relative to the previous year, with positive values indicating an increase.

2/ Data refer to net borrowing/lending.

3/ Data refer to public gross fixed capital formation.

4/ Data refer to total expenditure excluding public investment.

**Expenditure and revenue consolidation played different roles in the fiscal retrenchment effort.** Overall, fiscal adjustment in the NMS during the 1990s relied primarily on expenditure cuts. Several countries have been pursuing tax reforms aimed at lowering the overall tax burden, and general government revenues have been on a declining trend in the Baltic countries and Slovakia, reaching levels around 35 percent of GDP. Expenditures in these countries have followed even a steeper downward trend than revenues, allowing for fiscal adjustment while also reducing the tax burden.<sup>5</sup> However, since 2001, only Slovakia has implemented expenditure dominated fiscal adjustments. Revenue increases contributed to fiscal adjustment in the cases of Slovenia and Czech Republic.

**A number of countries have relied on investment cuts to consolidate fiscal positions, while others have managed to increase investment levels despite tighter budgets.** Table 2 presents changes in the overall balance, revenues, and expenditures, during years of fiscal adjustment in the NMS.<sup>6</sup> Among the 38 annual episodes of fiscal consolidations during 1999-2005, only 45 percent included cuts in public investment. In comparison, 53 percent involved revenue gains, and 71 percent cuts in other non-investment expenditures. For example, Slovakia improved its fiscal position through cuts in both investment and other expenditure in 2003-2004, whereas Latvia realized consolidations with higher public investment of about 0.3 percent of GDP per year in 2003-2005, supported by revenue efforts and cuts in other expenditures. Lithuania was also successful in both reducing fiscal deficits and increasing investments.

**Private investment has risen considerably to boost total investment in some countries, but has declined in others.** The trend in private investment differs significantly between two subgroups of NMS (Table 3). In countries with strong fiscal positions and modest debt, private investment has increased and has often more than offset cuts in public investment (e.g., Estonia). However, in countries with sizeable debt and persistent deficits, private investment has declined considerably in recent years, leading to lower total investment even when public investment increased (e.g., the Czech Republic and Poland).

**Strengthening fiscal positions have contributed to attracting more foreign capital to the NMS.** As shown in Figure 2a, improvements in fiscal positions are generally rewarded by more favorable ratings on sovereign bonds. For example, fiscal consolidations in Lithuania in 2001-2004 and Slovakia in 2003-2005 are associated with ratings of about one notch higher each year. As these ratings are important benchmarks to determine the access and cost of financing from the international capital markets to the private sector in the NMS, higher ratings are more likely to attract capital inflows with lower cost. Figure 2b further indicates that net foreign capital inflows are positively associated with the fiscal balances in the NMS.

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<sup>5</sup> Bulgaria is excluded from this analysis due to missing data.

<sup>6</sup> In this analysis, we include all years between 1998 and 2005 when there was an improvement in the overall fiscal balance.

Table 3. Public and Private Investment in NMS, 2000-2005  
(in percent of GDP)

	Total investment		Public investment		Private investment		Changes 1/		
	2000-2002	2003-2005	2000-2002	2003-2005	2000-2002	2003-2005	Total	Public	Private
Estonia	23.2	27.1	4.3	3.5	18.9	23.6	3.9	-0.8	4.7
Latvia	23.1	25.4	1.2	1.9	21.8	23.5	2.3	0.6	1.7
Lithuania	17.3	18.7	2.5	3.3	14.8	15.4	1.4	0.8	0.6
Czech Republic	24.2	21.1	3.7	4.8	20.5	16.3	-3.0	1.1	-4.2
Hungary	19.0	18.7	3.9	3.7	15.0	15.0	-0.3	-0.3	0.0
Poland	18.0	14.7	3.1	3.4	14.9	11.4	-3.2	0.3	-3.5
Romania	17.9	18.2	2.4	3.2	15.4	15.1	0.4	0.7	-0.3
Slovak Republic	24.1	22.9	3.0	2.4	21.1	20.6	-1.2	-0.7	-0.5
Slovenia	21.0	20.6	3.1	3.5	17.9	17.1	-0.4	0.4	-0.8
Memorandum items:									
Euro area 2/	18.4	17.8	2.5	2.5	15.9	15.3	-0.6	0.0	-0.6
Baltics	21.2	23.7	2.7	2.9	18.5	20.8	2.5	0.2	2.3
CEEs	20.7	19.4	3.2	3.5	17.5	15.9	-1.3	0.3	-1.6

Source: Eurostat (2007).

1/ Data refer to changes from 2000-2002 to 2003-2005, and positive values indicate an increase.

2/ Data refer to weighted averages of 12 countries in the Euro area.

Figure 2a. Fiscal Balance and Sovereign Rating, 2000-2005 1/

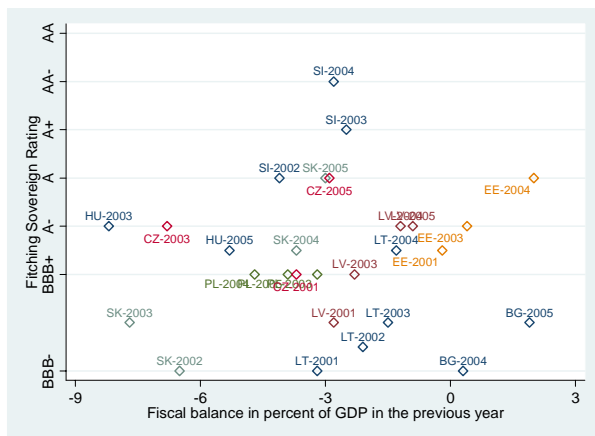
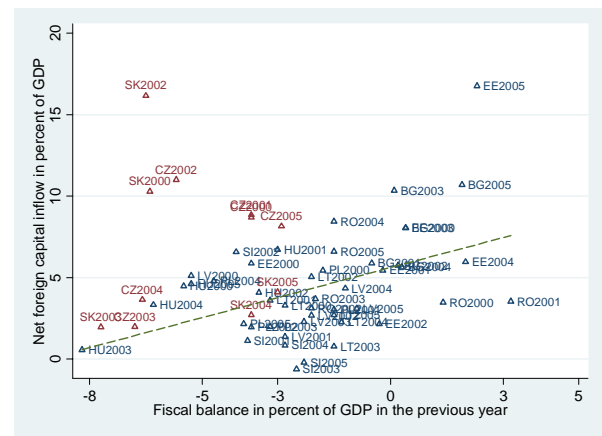


Figure 2b. Fiscal Balance and Foreign Capital Inflow, 2000-2005

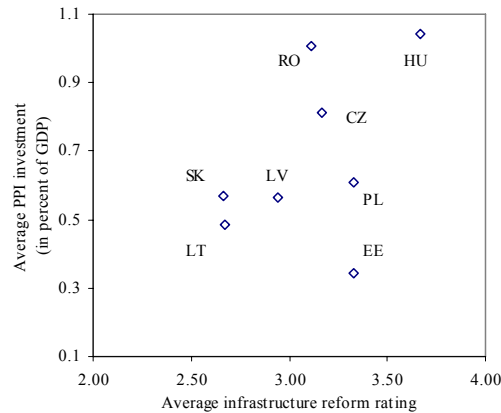


Sources: Eurostat (2007), Fitch Ratings (2007), and IMF(2006a)

1/ Fitch sovereign rating refers to annual average ratings of long-term foreign currency sovereign bond, and BBB is the minimum rating for investment grade.



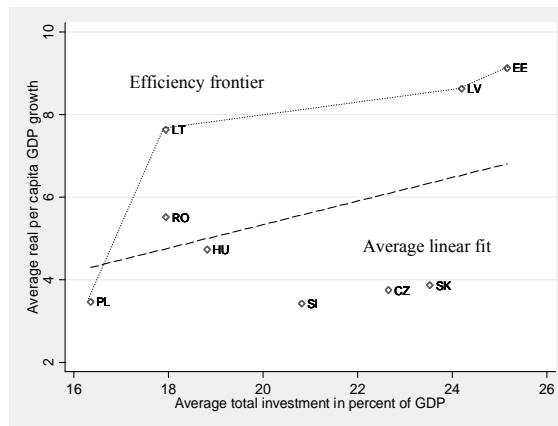
Figure 3. Private Infrastructure Investment and Infrastructure Policy Ratings 1/



Sources: EBRD (2006) and World Bank (2006).

1/ Private infrastructure investment refer to total contractual commitment in Private Participation in Infrastructure (PPI) projects classified as management and lease contract, concession, and greenfield projects, but exclude privatization projects. Data are averages in 2000-2005 for Czech, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia. Infrastructure policy ratings refer to data published by the EBRD to measure country-specific policy progress in infrastructure, with highest score of 4 corresponding to possessing standards and performance typical of advanced industrial economies.

Figure 4. Per capita GDP Growth and Total Investment, 2000-2005 1/ 2/



Sources: Eurostat (2007) and IMF(2006a).

1/ Data refer to averages by country in 2000-2005.

2/ The efficiency frontier is indicative of the highest per capita GDP growth that can be achieved at a given level of total investment.

**Institutional and policy constraints are perceived to be key barriers to the private sector in the NMS.** Tax issues, policy uncertainty, and macroeconomic instability, rather than the availability of infrastructure, are rated as the top business barriers by private firms in the NMS. As shown in Table 4, recent data from the World Bank Investment Climate Survey (ICS) indicate that among the 18 indicators of business constraints, firms consistently rank tax rates, economic and regulatory policy uncertainty, and macroeconomic instability as the

top business constraints. In contrast, none of the indicators on infrastructure, including access to land, electricity, telecommunications, and transport, are ranked above the 13<sup>th</sup> place in any NMS. Therefore, ICS data suggest that private investment decisions are more closely related to the strength of government institutions and policies than to the availability of infrastructure per se, and thus increasing public infrastructure alone may not necessarily increase private investment to stimulate growth until other more pressing concerns are addressed. In addition, pro-growth economic policy reforms, such as advancing tax reforms and removing regulatory barriers, can not only help unleash the potential for private sector in general, but also promote private investment in infrastructure in particular. As shown in Figure 3, private investment in infrastructure are positively related to ratings on overall infrastructure policies in the NMS.

**Improving the efficiency of investments is critical to promote growth and convergence in the NMS.** Macroeconomic analysis on the sources of growth indicate that achieving the ambitious income convergence objectives in the NMS requires large increases in investment with fixed productivity growth, but demands relatively more moderate progress on productivity growth at current levels of investments (Table 5). As shown in Schadler and others (2007), with productivity set at constant rates, halving the income gap in 10 to 20 years requires a hike in investment in Czech Republic, Hungary, and Slovakia from 12 to 15 percent of GDP from the current level. In comparison, with investment rate set at the current level, the required productivity growth is largely in line with the average level in the NMS. Furthermore, the growth experiences of the NMS also indicate that there are large potentials for many NMS to achieve higher per capita GDP growth at the current level of investment (Figure 4). For example, in 2000-2005, total investment in Slovakia is higher than Latvia by 6 percent of GDP, but the per capita GDP growth rate is lower by half. Therefore, while increasing investment is important for supporting convergence, the efficiency improvement of such investment is likely to be more critical to deliver the results.

Table 4. Business Constraints Perceived by Private Firms in the NMS 1/

Business constraint factors	Bulgaria	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Slovakia	Slovenia	Bulgaria	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Slovakia	Slovenia	Baltics	CEEs	Group average
	(2004)	(2002)	(2002)	(2002)	(2004)	(2003)	(2002)	(2002)	(2002)	(2004)	(2002)	(2002)	(2002)	(2004)	(2003)	(2002)	(2002)	(2002)			
	( average score on importance)									( ranking of constraints based on the average scores 2/)											
telecommunications	1.4	1.5	1.3	1.4	1.3	1.6	1.5	1.3	1.2	17	16	15	15	17	15	17	17	15	17	17	17
electricity	1.7	1.6	1.2	1.3	1.5	1.7	1.7	1.5	1.2	15	14	17	17	15	14	15	16	17	16	16	16
transport	1.8	1.6	1.5	1.4	1.5	1.5	1.6	1.6	1.2	14	15	14	16	16	17	16	15	16	15	15	15
access to land	1.6	1.4	1.3	1.4	1.8	1.6	1.7	1.7	1.4	16	17	16	14	14	16	14	14	13	14	14	14
tax rates	3.1	2.3	2.7	2.8	3.8	3.5	3.2	2.7	2.1	4	4	1	2	1	2	2	3	4	1	2	1
tax administration	2.2	1.8	2.1	2.8	2.9	3.0	2.7	2.2	1.7	12	12	7	3	3	5	5	8	10	4	8	6
customs and trade regulations	2.2	1.6	1.8	2.1	1.9	2.4	2.0	2.2	1.5	11	13	10	6	13	11	12	9	12	11	12	12
labor regulations	2.3	1.8	1.8	1.9	2.2	2.5	1.9	1.9	1.7	10	11	9	8	10	10	13	13	9	10	11	11
skills of available workers	2.2	2.8	2.1	2.1	2.7	2.3	2.0	1.9	1.8	13	1	8	5	5	12	11	12	8	3	10	8
licensing and operating permits	2.5	1.9	1.7	1.8	1.9	1.7	2.3	2.2	1.6	9	9	11	11	12	13	9	10	11	12	13	13
access to finance (e.g. collateral)	3.1	1.9	2.2	1.9	2.4	2.9	2.5	2.5	1.8	5	8	5	9	7	7	7	6	7	8	6	7
cost of finance (e.g. interest rates)	3.5	2.0	2.3	2.0	2.4	3.3	2.8	2.6	2.2	1	6	3	7	8	3	4	4	2	7	4	4
economic & regulatory policy uncertainty	3.4	2.4	2.4	2.8	2.9	3.6	3.0	3.0	2.3	2	3	2	1	2	1	3	2	1	2	1	2
macroeconomic instability (infl., exch. rate)	3.0	2.2	2.3	2.4	2.4	3.2	3.3	3.1	2.2	7	5	4	4	6	4	1	1	3	6	3	3
crime, theft, disorder	3.1	2.0	1.5	1.8	2.2	2.6	2.1	2.0	1.4	6	7	13	11	9	9	10	11	14	9	9	10
anti-competitive /informal practices	3.4	2.5	2.2	1.8	2.9	2.8	2.6	2.3	2.1	3	2	6	10	4	8	6	7	5	5	5	5
legal system/conflict res.	2.6	1.8	1.5	1.6	2.1	2.9	2.4	2.5	2.0	8	10	12	13	11	6	8	5	6	13	7	9

Source: The World Bank (2004).

1/ A higher value indicates higher importance of the corresponding factor as a business constraint for the surveyed business unit. Firms were asked to rate the importance of the potential business constraints on a 5-point Likert scale that corresponds to integer values of 0-4, and simple averages are then used to calculate country averages.

2/ A lower value corresponds to higher importance for the surveyed business unit.

Table 5. Implications for Investment and Productivity Growth for Convergence in the NMS

	Income per capita		Convergence target 1/		Scenario I: Maintaining productivity			Ave. investment in 2000-04	Scenario II: Maintaining investment			Ave. TFP growth in 2000-04	
	In PPP US\$	In percent of Euro area ave.	Years to half the income gap	Required growth rate	TFP 2/	Labor 3/	Capital 4/		Required Investment	Capital 5/	Labor 3/		TFP 4/
					( in percent per year)			( in percent of GDP)			( in percent per year)		
Estonia	12,773	49	10	6.1	3.4	0.5	2.1	29.5	27.7	1.9	0.5	3.7	5.2
Latvia	11,148	43	11	6.5	3.7	0.5	2.3	31.1	24.8	1.4	0.5	4.5	5.8
Lithuania	12,051	46	10	6.6	3.4	0.5	2.7	26.3	20.6	1.7	0.5	4.4	5.2
Czech Rep.	17,937	69	9	4.3	1.6	0.5	2.2	42.2	27.2	0.8	0.5	3.0	1.5
Hungary	15,399	59	11	4.6	1.6	0.6	2.4	35.3	23.1	1.0	0.6	3.1	2.9
Poland	11,921	46	20	4.3	1.6	0.6	2.1	25.1	20.0	1.3	0.6	2.4	1.8
Slovakia	13,437	52	16	4.4	1.6	0.6	2.2	38.6	26.5	1.0	0.6	2.9	3.0
Slovenia	19,251	74	8	3.9	1.6	0.5	1.8	27.4	24.3	1.4	0.5	2.0	1.7

Source: Schadler and others (2007).

1/ The income convergence targets are assumed to be 20 percent shorter than the time required to half the income gap with the predicted 2005-09 growth rate based on current trends. The convergence half-time is calculated based on  $T = \ln(2) / [(g - g^*) / \ln(y/y^*)]$ , where  $g$  is per capita income growth;  $y$  is the income level in PPP US\$; and  $g^*$  refers to the Euro area average.

2/ TFP growth is assumed to be 1.6 percent for the CEEs and gradually decline to the assumed level for the Baltics over ten years.

3/ Employment rates are assumed to increase by ½ percentage point per year and labor's share is 0.65.

4/ Calculated as a residual to derive the required investment or TFP growth.

5/ Assumes investment/GDP remains at the 2000-04 average.

### III. INFRASTRUCTURE IN THE NEW MEMBER STATES AND THE ROLE OF EU SUPPORT

**At the start of the transition to market economies, NMS inherited infrastructure networks in serious disrepair.** Central planning priorities paid little attention to cost, efficiency, or environmental considerations. In the telecommunications sector, technology was outdated and households and businesses lacked sufficient access. In the railways, the infrastructure was designed to support heavy industrial production and long-term haulage of raw materials. Investment in roads was limited and use of private cars was discouraged. Finally, water supplies were generally unreliable and of low quality, and waste water disposal was not environmentally friendly. (European Bank of Reconstruction and Development (EBRD), 2004).

**Since then, important reform efforts have been made.** Since the end of the 1990s, the EBRD has used an indicator to assess the status quo and pace of reform in key infrastructure sectors in transition countries.<sup>7</sup> Scores range from 1 (no reform) to 4.3 (advanced country levels). This indicator suggests that all countries have made considerable progress in reforming infrastructure, but this has not been uniform across NMS (Table 6). In terms of average performance across all infrastructure sectors, Hungary comes closest to standards in advanced countries, with an average indicator of 3.67. Estonia, the Czech Republic, Poland, and Romania, come in second place, while the rest of the NMS are farthest from standards in industrialized countries.

**Despite progress, the infrastructure in most NMS lags behind when compared to more advanced European countries.** Table 7 presents infrastructure indicators in the NMS and the EU-12 in the telecommunications, energy, and transport sectors. Since the mid-1990s, the process of modernizing infrastructure was the fastest in telecommunications, with the average number of phone subscribers in NMS increasing four-fold in recent years. However, access in telecommunications in NMS remains about half the level in the EU-12. Progress in the energy and road sector was more heterogeneous across NMS. In energy, rapid increase in energy generation capacity in the CEEs (except for Poland) contrasts with less marked improvements in Bulgaria and Romania, and the Baltics. In contrast, the Baltics have made important strides expanding their road networks, followed by the CEEs, while Romania and Bulgaria remain significantly behind.

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<sup>7</sup> Key criteria include the path of reform to adjust tariffs, to commercialize, to deregulate markets, and to open them to the private sector.

Table 6: Indicators of Infrastructure Reforms

Sector	Country	2000-2004 2/	2005	2006	Sector	Country	2000-2004 2/	2005	2006
Overall infrastructure reform	Estonia	3.33	3.33	3.33	Railways	Estonia	4.20	4.33	4.33
	Latvia	2.93	3.00	3.00		Latvia	3.33	3.33	3.67
	Lithuania	2.67	2.67	3.00		Lithuania	2.33	2.33	2.33
	Bulgaria	2.93	3.00	3.00		Bulgaria	3.26	3.33	3.33
	Czech Republic	3.13	3.33	3.33		Czech Republic	2.60	3.00	3.00
	Hungary	3.67	3.67	3.67		Hungary	3.33	3.33	3.33
	Poland	3.33	3.33	3.33		Poland	4.00	4.00	4.00
	Romania	3.07	3.33	3.33		Romania	4.00	4.00	4.00
	Slovak Republic	2.60	3.00	3.00		Slovak Republic	2.53	3.00	3.00
	Slovenia	2.93	3.00	3.00		Slovenia	3.00	3.00	3.00
Electric power	Estonia	3.27	3.00	3.33	Roads	Estonia	2.33	2.33	2.33
	Latvia	3.07	3.33	3.33		Latvia	2.33	2.33	2.33
	Lithuania	3.07	3.33	3.33		Lithuania	2.33	2.33	2.33
	Bulgaria	3.40	3.67	3.67		Bulgaria	2.33	2.67	2.67
	Czech Republic	2.93	3.33	3.33		Czech Republic	2.93	3.00	3.00
	Hungary	4.00	4.00	4.00		Hungary	3.33	3.67	3.67
	Poland	3.20	3.33	3.33		Poland	3.20	3.00	3.00
	Romania	3.07	3.33	3.33		Romania	3.00	3.00	3.00
	Slovak Republic	3.40	4.00	4.00		Slovak Republic	2.33	2.33	2.33
	Slovenia	3.00	3.00	3.00		Slovenia	3.00	3.00	3.00
Telecommunications	Estonia	4.00	4.00	4.00	Water and wastewater	Estonia	4.00	4.00	4.00
	Latvia	3.00	3.00	3.00		Latvia	3.26	3.33	3.33
	Lithuania	3.33	3.33	3.67		Lithuania	3.26	3.33	3.33
	Bulgaria	3.07	3.33	3.33		Bulgaria	3.00	3.00	3.00
	Czech Republic	4.00	4.33	4.33		Czech Republic	4.00	4.00	4.00
	Hungary	4.00	4.00	4.00		Hungary	4.00	4.00	4.00
	Poland	4.00	4.00	4.00		Poland	3.26	3.33	3.33
	Romania	3.00	3.00	3.33		Romania	3.07	3.33	3.33
	Slovak Republic	3.06	3.67	3.67		Slovak Republic	2.53	3.00	3.33
	Slovenia	2.87	3.00	3.00		Slovenia	3.33	3.33	3.33

Source: EBRD (2006) .

1/ Indicators refer to ratings based on judgment of the EBRD's Office of the Chief Economist about country-specific progress in transition. The sector ratings range from 1 to 4.33 with highest scores corresponding to possessing standards and performance typical of advanced industrial economies. The overall ratings refer to average performance across all sectors.

2/ Data refer to simple averages.

**Estimates of investment needs in the region are scarce, but suggest that upgrading infrastructure will require important efforts.** Auer (2004) and Brenck and others (2005) suggest that investments of over EUR 500 billion or about 5 percent of GDP over the next 15 years are required to upgrade infrastructure in the NMS to levels in the old members (Table 8). The sectors requiring the most investment include water and sanitation and energy, accounting for about 60 percent of total investment needs. The modernization of the telecommunications and transportation sectors is likely to require moderate investment, while environmental investment needs appear somewhat less significant.<sup>8</sup>

<sup>8</sup> According to estimates by CASE (2005), the environmental investment needs of the EU8 are estimated at EUR 47-69 billion (Poland 22-45 billion, Hungary 10 billion, and the Czech Republic 9.4 billion).

Table 7: Infrastructure Indicators in NMS and the EU-12

	Electricity generation (kwh)		Fixed and mobile phone subscribers		Road networks (km)		Internet users	
	1991-1995	1998-2002	1991-1995	1998-2002	1991-1995	1998-2002	1991-1995	1998-2002
Baltic states								
Estonia	7.1	6.2	245.6	740.1	5.3	8.2	10.5	228.5
Latvia	1.7	1.9	261.8	506.5	5.6	22.7	..	68.6
Lithuania	4.6	4.2	235.1	514.6	12.3	19.5	..	64.0
Central and Eastern European countries								
Czech Republic	5.8	6.9	197.9	816.9	5.4	12.4	11.0	121.5
Hungary	3.2	3.6	161.9	714.3	6.5	6.8	2.8	95.3
Poland	3.5	3.7	118.5	413.5	6.2	6.5	2.4	99.2
Slovak Republic	4.5	5.5	173.2	564.6	4.0	6.9	3.2	92.1
Slovenia	6.2	7.0	273.7	925.6	5.7	10.1	14.4	210.7
Recently acceded members								
Bulgaria	4.5	5.1	281.4	485.2	4.0	4.3	0.5	50.9
Romania	2.5	2.4	117.5	297.4	3.4	4.5	0.4	46.1
Memorandum items:								
Group average	4.6	4.9	208.5	649.5	6.4	11.6	7.4	122.5
Baltic states	4.5	4.1	247.5	587.0	7.7	16.8	..	120.3
Central Eastern Europe	4.6	5.3	185.0	687.0	5.6	8.6	6.8	123.7
Recently acceded members	3.5	3.7	199.5	391.3	3.7	4.4	0.4	48.5
EU-12 Average 1/	5.5	6.5	473.1	1119.1	11.1	15.4	10.6	234.9

Source: The World Bank (2005).

1/ Data refer to simple averages of the 12 countries in the Euro area: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, the Netherlands, Spain, and Portugal.

Table 8. Infrastructure Investment Needs for NMS, 1995-2010

Sector	Reference	Investment needs	
		in € billion	in percent of GDP
Roads	Modernization/construction to EU-15 average density	44	0.5
Railways	Modernization/construction to EU-15 average density	37	0.4
Telecoms	Telecom density of 35 mainlines per 100 citizens	63	0.9
Water/Sewage	European standards for collection and treatment	180	1.5
Energy	Network development, oil, gas and coal sector reforms	110	1.4
Environment	EU-Directive Air Pollution and Waste	71	0.3
Sum		505	5.0

Source: Brenck and others (2005).

**These estimates are useful to provide orders of magnitude on investment needs, although the methodologies applied are not without caveats.** As stressed by IMF (2005), a shortcoming to many current estimates of infrastructure investment needs is that they abstract from country-specific resource and absorption capacity constraints. Therefore, they cannot provide concrete policy guidance on how and within what timeframe to fill such gaps. A better approach would be to assess the scope for mobilizing both private and public resources for infrastructure spending within a sound and sustainable macro-fiscal policy framework and, in parallel, to identify the projects that should be given priority based on their economic and social rates of return.

**In principle, countries seeking to upgrade their infrastructure have several policy options.** These options include: raising financing for public investment by borrowing, increasing public saving, and reallocating public spending from other sectors; getting more out of their investments by improving investment planning and project evaluation and implementation procedures; and encouraging private sector investment. IMF (2005) classified these according to whether they operate primarily through the private sector or the public sector, and the time needed to implement them (Table 9).



Table 9. Possible Policy Instruments to Help Increase Total Infrastructure Investment

	Private Investment	Public Investment
Short- to Medium-Term	Use public-private partnerships. Provide government guarantees.	Reallocate public expenditure. Implement tax policy measures. Relax fiscal targets, financed by debt or the sale of state assets.
Medium- to Long-Term	Implement improvements in market- supporting institutions that help strengthen the rule of law, property rights, and the regulatory framework. Deepen financial markets.	Carry out structural reforms, incl. civil service reform and social security reform to help reduce current expenditure. Improve tax administration and expenditure management systems to improve efficiency.

Source: IMF (2005).

**The appropriate strategy for NMS will vary from country to country and will critically depend on the macro-fiscal environment.** To start with, all countries must adhere to the SGP ceilings on deficits and public debt for EU members, which limits their room for maneuver with regard to public investment. In addition, the particular fiscal and macroeconomic environment in NMS further constrains some of the options to increase public investment. Countries with stronger fiscal positions, such as the Baltics, have generally more policy flexibility. However, even countries with strong fiscal positions need to be mindful of the overall implications of relaxing fiscal targets to increase public investment, including on debt and macroeconomic sustainability, particularly in cases where signs of overheating are emerging. Countries with large fiscal deficits and debt levels, such as Hungary, would need to match increases in public investment with commensurate increases in public saving. As the tax burden is already large, increases in public saving will need to be driven by reforms aimed at limiting current expenditures on a sustainable basis. In addition, efforts should be strengthened to improve public expenditure management to better assess the productivity of public spending programs, and to broaden the tax base, including by making tax collection more efficient.

**In this context, the remainder of this section analyzes the role of EU support in supporting infrastructure development.** Tight fiscal positions and reductions in domestic funding for public investment have, to some extent, been counterbalanced by the availability of new financing schemes. Part of this financing has been provided by EU funds directed toward projects with a regional impact and of common European interest. However, while EU funding is a great benefit to the NMS, it also poses challenges, including due to co-financing and additionality rules that may impact both the overall level and the composition of spending. This comes at a time when there are pressures to reduce government fiscal deficits and debt, as required by the Maastricht criteria. The remainder of this section discusses these issues from the perspective of the NMS. The next section

focuses on the role of PPPs as an alternative to traditional public investment to develop infrastructure.

### **A. The Role of EU Support**

**EU accession provided access to a variety of funding schemes to NMS.**<sup>9</sup> These schemes serve three key objectives: income convergence, agricultural support, and the development of internal market institutions. EU funds are significant from the point of view of the NMS. In the last 15 years, nearly EUR 30 billion has been transferred to the NMS; and, under the new financial perspective 2007-2013, EU transfers would be notably larger than in the pre-accession and 2004-2006 periods. Net transfers (taking into account the NMS contributions to the EU budget) are expected to almost triple from an average of 1 percent of GDP in 2004-2006, with smaller net transfers observed in the beginning of the period and with poorer countries expected to receive more (EC, 2006). (Table 10).

**Structural and Cohesion Funds are the most relevant from the viewpoint of infrastructure development.** EU funds most relevant to the provision of infrastructure are: (i) the Structural Funds (particularly the European Regional Development Fund and the European Social Fund); and (ii) the Cohesion Fund (Box 1).<sup>10</sup> Both are grouped under EU terminology under the heading “Structural Actions” and are aimed at fostering income convergence. Therefore, they account for a larger share of EU commitments in the less wealthy NMS. Structural and Cohesion Funds are set to increase substantially under the new perspective, mainly at the expense of unconditional lump sum budget payments granted in the first years of membership primarily to wealthier countries such as Slovenia. The committed amounts range from 1.5 percent of GDP in Slovenia to over 3 percent of GDP in Hungary.

**Aiming to foster an efficient use of money, EU transfers require co-financing and additionality.** Depending on the domain, EU funds can be used to finance up to 75-85 percent of a project. The rest may come from public or private sources.<sup>11</sup> Co-financing as such does not necessarily imply a direct negative impact on the budget, since resources can be reallocated from already existing budget lines. This is not possible, however, in the case of Structural Funds, which are subject to additionality rules. These require that spending in a certain category, including co-financing, be higher than the average spending in the

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<sup>9</sup> See Appendix 1, and Rosenberg and Sierhej (forthcoming), for a description of the full menu of EU funds for NMS.

<sup>10</sup> Some countries also continue to have access to the pre-accession funds PHARE and ISPA, which also aim to contribute to infrastructure development. The discussion in this section focuses only on EU funds available after accession.

<sup>11</sup> EC (2006) estimates that co-financing in 2004 amounted to about 0.3 percent of GDP in 2004 for the NMS, ranging from 0.1 percent of GDP in the wealthier NMS (Slovenia, Malta), to 0.6 percent of GDP in the poorer Baltic states that receive relatively more EU assistance.

preceding two years. A similar additionality requirement does not exist for the Cohesion Fund, internal policies, or transitional expenditure.

Table 10. EU Funds for NMS, 2004-2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012 /2	2013 2/
	( in € million)									
Bulgaria	..	..	..	1,130	1,543	1,872	1,766	1,838	1,951	2,060
Romania	..	..	..	5,113	5,947	6,035	5,645	5,820	5,989	6,251
Czech Rep.	1,627	1,915	2,028	3,998	4,140	4,255	4,413	4,558	4,694	4,826
Estonia	400	428	474	238	557	754	824	699	629	1,160
Hungary	1,764	2,107	2,377	4,090	4,270	4,465	4,681	4,891	5,116	5,351
Latvia	665	706	699	720	757	794	842	885	930	974
Lithuania	984	1,124	1,182	1,326	1,383	1,441	1,518	1,593	1,669	1,745
Poland	6,584	8,165	9,062	11,118	11,711	12,300	12,587	13,177	13,753	14,331
Slovakia	946	1,057	1,187	1,825	1,907	1,995	2,101	2,208	2,315	2,421
Slovenia	473	527	527	788	789	788	797	803	809	814
	(in percent of GDP)									
Bulgaria	..	..	..	4.7	5.9	6.5	5.7	5.4	..	..
Romania	..	..	..	4.8	4.9	4.4	3.7	3.4	..	..
Czech Rep.	1.9	1.9	1.8	3.3	3.2	3.0	2.9	2.8	..	..
Estonia	4.4	4.1	3.9	1.8	3.7	4.5	4.5	3.5	..	..
Hungary	2.2	2.4	2.9	4.8	4.7	4.7	4.7	4.7	..	..
Latvia	6.0	5.6	4.6	4.0	3.7	3.4	3.3	3.2	..	..
Lithuania	5.4	5.5	5.1	5.2	4.9	4.7	4.5	4.4	..	..
Poland	3.2	3.4	3.4	4.0	4.0	4.0	3.9	3.8	..	..
Slovakia	2.8	2.8	2.8	3.8	3.6	3.4	3.3	3.1	..	..
Slovenia	1.8	1.9	1.9	2.7	2.6	2.4	2.3	2.2	..	..

Sources: IMF(2006a) and Rosenberg and Sierhej (forthcoming).

1/ ".." indicates data are not available.

2/ GDP projections for 2012 and 2013 are not available.

**Although each NMS is a net receiver of EU transfers, the impact on the country's budget could be negative depending on the ability to substitute expenditures.** EU transfers impact both the revenue and the expenditure side of the budget. The net effect will critically depend on how much a country is able to substitute national spending for spending financed with EU support. Estimates on the net fiscal impact of EU transfers vary, with most recent studies arguing that EU funds have led to a fiscal drag.<sup>12</sup> For instance, recent IMF country reports for several NMS suggest a negative net budget impact, with estimates ranging from -0.1 percent of GDP in Romania in 2007 to -2.6 percent of GDP in Bulgaria in 2007 (IMF 2006b, 2006c, 2006d, and 2007). More recently, Rosenberg and Sierhej (forthcoming) undertook the first ex-post assessment, and concluded that EU funds may have led to a fiscal drag of about 0.5 percent of GDP. This is the first study that uses actual budget data following accession for a few NMS (Hungary and Slovakia).<sup>13</sup>

<sup>12</sup> Hallet and Keereman (2005) concluded that the fiscal impact would be marginally positive. In contrast, Sommer (2003), and Kopits and Székely (2002) suggested the fiscal impact would be negative.

<sup>13</sup> In line with the other studies, assumptions on expenditure substitution are made for the rest of the countries.

### **Box 1. EU Funding Relevant to Infrastructure Development**

#### **Funds for Objective 1a: Competitiveness for Growth and Employment**

The European Development Fund (ERDF) and the European Social Fund (ESF) are the key financing instruments for programs under this heading, and many programs are relevant for infrastructure development.

- *Eligibility:* all EU member states and subnational regions
- *Project financed:* infrastructure projects covered by the defined scope of the relevant programs, such as the TENs (energy, telecom, and transport), Marco Polo II (environment-friendly transport), the 7<sup>th</sup> Research Framework Programme (including R&D infrastructure), and CIP (including energy).
- *Grant financing:* variable, depending on the project type and the income of the hosting countries or regions, but generally up to 50 percent of total eligible expenditure
- *Total budget available:* about €40 billion for infrastructure related programs (2007-2013)

#### **Structural Funds**

Four types of structural funds were established to support structural economic and social development. The ERDF and ESF are the two types most relevant for infrastructure, and also the only two remaining structural instruments in the 2007-2013 framework.

- *Eligibility:* all EU member states and subnational regions can qualify for some type of structural funding.
- *Projects financed:* The ERDF finances productive investment for more jobs, infrastructure, and small and medium-sized enterprises. The ESF funds programs to develop human resource and labor market, such as vocational training, education and careers advice, and entrepreneurship support.
- *Grant financing:* variable, depending on the income of the hosting countries or regions, but generally up to 85 percent of total eligible expenditure.
- *Total budget available:* €195 billion (2000-2006); €278 billion (2007-2013)

#### **Cohesion Fund**

The Cohesion Fund was established in 1993 to complement the structural funds. It helps less prosperous Member States reduce economic and social disparities in order to strengthen cohesion and solidarity in the EU, and mainly finances projects in environmental and transport infrastructure.

- *Eligibility:* member states with per capita GNI (measured in purchasing power parities) below 90 percent of the EU average and a program designed to fulfill the conditions of economic convergence. The initial recipients are Ireland, Greece, Spain, and Portugal, but Ireland no longer qualifies since 2004. The eligibility also extends to the 10 new members joined in May 2004 and to Bulgaria and Romania joined in January 2007.
- *Projects financed:* projects in environmental or transport infrastructure. Energy efficiency or renewable energy projects may also qualify in 2007-2013.
- *Grant financing:* up to 85 percent of the total eligible expenditure
- *Total budget available:* €18 billion (2000-2006); €70 billion (2007-2013)

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Source: EC.

**Aside from the net fiscal impact, EU transfers, and in particular Structural and Cohesion funds are likely to modify spending patterns.** EU funds are likely to impact expenditure allocation patterns, with spending on EU programs taking priority over domestically financed projects. This would result on one hand from the need to make room

for co-financing requirements under tight fiscal budgets, and on the other hand from additionality rules, which will necessarily displace other spending under a fixed expenditure envelope. In effect, ex-ante additionality tables for Structural Funds for the 2004-2006 period suggest that expenditure composition would be affected. Figure 5 suggests that the share of infrastructure spending in total spending would actually decline, with increasing allocations towards programs for productive environment.<sup>14</sup> Under the new perspective, there has been a reorientation of expenditure in favor, in particular, of policies aimed at growth and employment, with resources for transport and energy (TEN) increasing by nearly 139 percent (Box 2). These changes would be consistent with the investment needs identified before.<sup>15</sup>

**The impact, however, will not be very evident until NMS step up absorption rates.** As noted by Rosenberg and Sierhej (forthcoming), absorption of Structural and Cohesion Funds has picked up only slowly in some countries. Demand is high and contracting of funds committed under the 2004-2006 financial perspective is proceeding swiftly. The bottleneck, however, is the absorption of EU funds, related to the administrative capacity to control projects, ensure efficient implementation, provide co-financing, and receive EU funds after the submission of proper documentation. Increased allocations under the new financial perspective are likely to pose additional challenges, requiring an acceleration of past absorption rates if funds are not to be de-committed under the n+ rules.<sup>16</sup>

**To conclude, EU funds present an important vehicle to support increases in infrastructure, but their use is not without challenges.** From an overall fiscal perspective, EU funds could have a detrimental budget effect, unless countries have the flexibility to reallocate spending from national programs to programs financed with EU support. Given that most countries have limited room to accommodate additional spending through higher deficits in a sustainable manner, the use of EU funds is likely to have a significant effect on spending allocation patterns. In addition, the use of EU funds pose challenges from a public expenditure management perspective, requiring that countries step up efforts to effectively absorb the increased allocations.

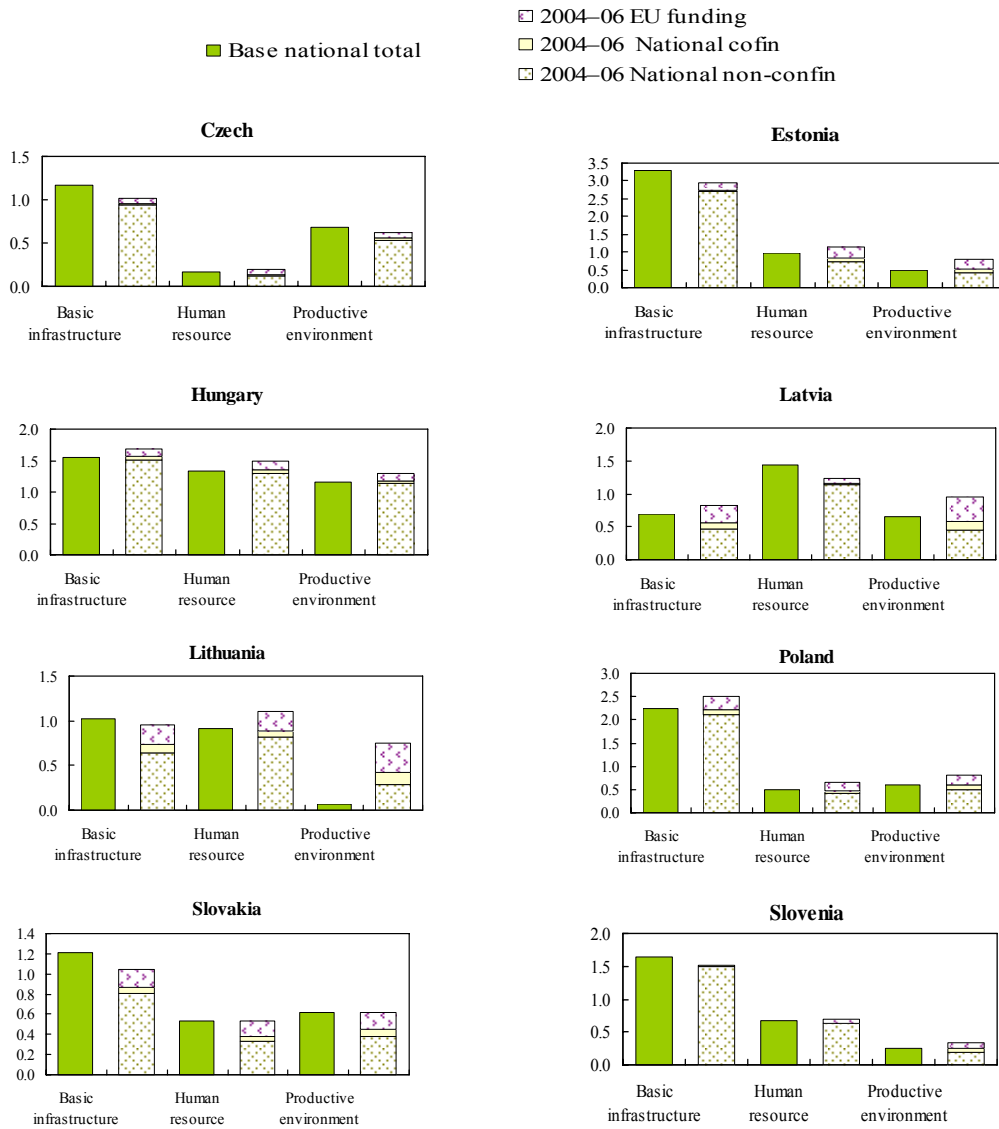
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<sup>14</sup> Basic Infrastructure includes sectors such as transport, telecommunication, energy, etc; Human Resources includes sectors such as education, training, and research and development; and Production Environment includes sectors such as agriculture, industry and services, and tourism.

<sup>15</sup> Discussions with the EC on the specific country priorities regarding the use of these funds are based on the National Strategic Reference Frameworks and are expected to be finalized in mid-2007.

<sup>16</sup> The rules stipulate that if a country fails to use the allocated EU fund within a certain period after the year in which it was committed, it will lose such unused allocation.

Figure 5: Additionality and Structural Funds, 2004-06 1/  
(in percent of GDP)



Sources: EC (2006) and IMF(2006a).

1/ Data only cover allocations broken into the three categories.

### **Box 2. Changes in Expenditure Orientation in the New EU Financial Perspective**

Under the new perspective, there is a reorientation of expenditure in favor, in particular, of policies aimed at growth and employment, compared to the 2000-2006 period. The changes in 2006-2013 by heading are as follows:

- 69% increase for Competitiveness for growth and employment (sub-heading 1a), including:
  - 139% increase for transport and energy (TENs)
  - 81% increase for environment-friendly transport (Marco Polo II)
  - 75% increase for research (7th Research Framework Programme)
  - 60% increase for the Competitiveness and Innovation Programme (CIP)
  - 52% increase for knowledge/training (Life Long Learning and Erasmus Mundus programmes)
- 21% increase for Cohesion for growth and employment (sub-heading 1b), including:
  - 11% increase for structural funds
  - 74% increase for the Cohesion Fund
- 8% decrease for the Preservation & management of natural resources (heading 2)
- 78% increase for Citizenship, freedom, security and justice (heading 3)
- 8% increase for the EU as a global player (heading 4)

Source: EC.

## **IV. PPPs: THE WAY FORWARD?**

**PPPs refer to arrangements where the private sector supplies infrastructure assets and services that traditionally have been provided by the government.** Although there is no clear cut definition of what constitutes a PPP, most definitions point to three key characteristics: (i) private execution and financing of public investment, (ii) an emphasis on both investment and service provision by the private sector; and (iii) risk transfer from the government to the private sector.

**The main argument in favor of PPPs relates to potential efficiency gains.** In particular, it is argued that, through private-sector management and innovation, PPPs provide better value-for-money (VfM) than traditional public procurement of the same assets and services. Yet, while successful PPPs deliver high-quality services at lower cost than potential government alternatives, this generally requires efficiency gains to be large enough to cover (i) the typically higher private sector borrowing costs, and (ii) the significantly higher transaction costs of PPPs.<sup>17</sup> These costs are passed on to the government in PPP contracts.

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<sup>17</sup> Higher transaction costs arise from the complexity of PPP contracts compared to traditional public procurement. Recent EIB studies have shown that total transaction costs (bidding and negotiation) during the procurement stage average 10 percent of a project's capital value. See Dudkin and Vålilä (2005). Higher transaction costs led the United Kingdom to set a floor on the size of PPP projects of £21 million. Brazil's PPP law also sets a floor on the size of PPPs.

**However, PPPs can also be used to move public investment off budget and debt off the government balance sheet, increasing fiscal risks.** Even PPPs that do not deliver VfM can be a tempting alternative for financially constrained governments, as PPPs may increase investment without immediately adding to government borrowing. The fiscal risks inherent in PPP implementation can also be compounded by inappropriate institutional arrangements and lack of expertise to identify, quantify, and manage the complexities involved in PPPs. As a result, governments can end up facing most of the risk involved in a PPP project and large fiscal costs down the road. The experience with PPPs in several NMS indeed suggests that these costs can be sizable (Box 3).

**Managing fiscal risks from PPPs requires a sufficiently strong overall institutional framework to be in place.** Fiscal risks are more likely to arise when investment projects are of poor quality; the legal and fiscal institutional frameworks for PPPs are weak; and accounting and reporting systems do not transparently disclose the fiscal implications of PPPs. Hence, effective management of fiscal risks from PPPs requires governments to focus on strengthening the overall framework for public investment planning, developing the legal and institutional framework to handle PPPs, and implementing transparent accounting and reporting. Clearly, political commitment and good governance would be overarching conditions for the success of PPPs. Pervasive corruption would be a serious obstacle to successful PPPs in the same way it prevented successful privatization.

**This section assesses progress made by NMS in implementing best practices in this area.** In the context of NMS, PPPs could play an important role in providing the needed investment to upgrade infrastructure. The goal should be to ensure that PPPs are pursued to increase the efficiency of public investment. However, NMS may have an incentive to use PPPs solely to by-pass fiscal constraints due to (i) the need to comply with Maastricht fiscal rules and (ii) the lack of strict accounting and reporting guidelines. Therefore, NMS should put in place proper PPP frameworks aimed at capitalizing efficiency gains while limiting fiscal risks. The remainder of this section reviews the current PPP frameworks in NMS with respect to overall public investment planning, laws and institutions to handle PPPs, and fiscal accounting and reporting.

#### **A. Public Investment Framework**

**PPP projects should be integrated with the government's investment strategy, its medium-term fiscal framework, and the budget cycle.** PPP projects should be part of the government's investment strategy and be pursued only when they offer VfM compared to standard public procurement. This will typically be a two-stage process. The first stage involves deciding whether a particular project is worthwhile based on standard project appraisal techniques such as cost benefit analysis (CBA), and within an overall investment planning framework. The second stage involves deciding whether a worthwhile project should be undertaken as a direct government investment or as a PPP. To ensure that the fiscal implications of PPPs are fully taken into consideration in the government's medium-term fiscal framework and the budget, PPP projects should not be allowed to move forward outside the regular cycle of other investment projects.



**In several NMS, the public investment framework needs to be strengthened to be conducive to successful PPPs.** In most NMS, concrete public investment planning and implementation are still not embedded in a medium-term budget framework. This is the case, for example, in Bulgaria, Cyprus, and Hungary. Developing a full-fledged medium-term budget framework would help investment planning and prioritization. This would be conducive to developing proper PPPs, since best practices on PPPs are more likely to flourish in countries that already have a sound public investment framework, leading to the selection of good investment projects and minimizing project selection risks.

**NMS also need to improve technical aspects of public investment planning.** Several NMS do not use appropriate technical tools for evaluating costs and benefits to inform their decisions on investment projects. An example is provided by motorway concession projects recently undertaken in Poland, for which the PPP option was not compared to traditional public procurement, and there was a general lack of sound CBA and VfM analysis.<sup>18</sup> In some NMS, CBA and VfM assessments do not inform the decision on whether to go ahead with the PPP project or not, but are rather carried out after the decision to go ahead with the PPP project has been taken.<sup>19</sup> This is the case, for example, in Cyprus and Hungary. In Hungary, VfM assessments typically build in an “efficiency factor” from the PPP option, generally justifying the use of PPPs. These also ignore the typically higher transaction costs from PPPs.

**The lack of proper PPP evaluations encourages the use of PPPs to by-pass fiscal constraints rather than to achieve VfM.** There is often a perception, not only in NMS, that PPPs allow governments to create infrastructure that they would otherwise not be able to afford. As noted above, the latter is likely to be reinforced in a context in which countries have to comply with the Maastricht fiscal criteria.<sup>20</sup> However, PPPs create fiscal space through efficiency gains and not by being moved off budget. Even if not recorded immediately in deficits and debt levels, PPPs do create future liabilities (certain or contingent) for governments; thus, they do not alleviate the intertemporal government budget constraint except to the extent that: (i) they may facilitate mobilization of resources through user fees; and (ii) promote, through the involvement of private know-how and

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<sup>18</sup> These include a A1 and A2 motorway concessions (see Box 3). The 2005 approval of a new Polish PPP Law, which requires a VfM analysis, represents a positive development in this area. However, executive provisions to support actual VfM implementation are still missing, because essential elements for such analysis are yet to be developed by the MoF and the MoE.

<sup>19</sup> In Hungary, the State Audit Office carries out *ex-post* assessments of whether a certain PPP projects achieved VfM. *Ex-post* assessments can undoubtedly be useful learning devices to improve the design of future PPP projects. However, the different roles of *ex-ante* and *ex-post* assessments should be recognized, and the decision to use PPPs rather than traditional public procurement should be based on an appropriate *ex-ante* assessment.

<sup>20</sup> The 2004-2006 *Convergence Program* of Hungary, for example, clearly stated the government’s intention to pursue PPPs to move investment expenditure off budget and liabilities off the government’s balance sheet.

management, efficiency gains sufficient to compensate for the typically higher borrowing costs of private sector partners, and the higher transaction costs involved in PPPs. A proper implementation of a VfM test, which assesses the full life-cycle costs of PPPs compared with traditional public procurement, represents a reality check in this regard and would help refuting the view that PPPs always imply budgetary savings.

**Box 3. PPPs and Fiscal Risks: Selected Experiences in the Highway Sector in NMS**

Fiscal risks in the implementation of PPPs in the highway sector have already manifested themselves in several NMS. One problem that has plagued PPP implementation in this sector is related to overoptimistic demand projections. The upward bias of projections is partly due to the inherent technical difficulty of projecting traffic flows. However, moral hazard is also likely to play a role, since bidders have an incentive to overestimate demand and promise low tolls, while counting on renegotiations once the contract has been awarded. Limited government capacity in evaluating PPP proposals and a the lack of a clear PPP legal framework often imply costly renegotiations for the government.

The experience of Hungary illustrates some of the problems that can result from overly optimistic traffic forecasts, overestimation of users' willingness to pay, and inefficient risk allocation. Hungary's M1 Highway PPP came to be heralded as the Euromoney magazine "finance project of the year 1995." It quickly became clear that traffic forecasts had been too optimistic. There was a strong diversion of traffic to a toll-free parallel road. Moreover, several litigation procedures were initiated against the consortium holding the concession. By the time construction ended, the private partner had suffered important financial losses. In 1999, the project was renationalized. Similarly, in the case of the M5 Highway, also a PPP, the original contract was renegotiated in 1995, only a year after it was signed, to provide minimum revenue guarantees. When the first stretches of the M5 were opened, traffic was at 85 percent of the original forecast, requiring compensation from the budget. The contract was renegotiated again in 1997 with the government fully assuming the traffic risk.

Poland's experience with PPP projects in the highway sector has also been mixed. A 150 Km stretch of the A2 highway, for example, was awarded in 2000 as a 40-year concession including the right to levy tolls. However, demand was lower than expected, as most freight transporters bypassed the tolled stretch of the highway. This situation led the government and the concessionaire to negotiate compensation payments. Similarly, a 35-year concession for a 152 kilometers stretch of the A1 highway—which was awarded in 1997—did not reach financial close, leading to the concessionaire's request for governmental support for the project.

Another example of the fiscal risks involved in PPP implementation is provided by the Czech Republic, where several attempts to implement PPPs in the highway sector have failed. An early attempt to implement a toll-based concession for the D5 highway (from Prague to the German border) was abandoned as it became evident during the tendering process in 1993 that demand for the toll road would be too low to ensure cost recovery. In 2001, the government directly awarded a concession for a 80 km long stretch of the D47. However, criticism of the direct concession award and overpriced remuneration led to cancellation of the contract. As a consequence, the government was forced to pay about EUR 20 million for breach of contract.

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Source: Based on Brenck and others (2005).

## B. Legal and Institutional Framework

**To handle PPPs, a strong legal and institutional framework is needed.** A strong PPP framework can help the government to build a reputation as a good partner and lower political and regulatory risks for the private sector, thereby increasing the VfM the government can obtain. In particular, the legal framework should cover all major aspects of the PPP process and be conducive to private participation. In addition, PPP contracts should be awarded based on competitive bidding to reap the benefits of private-sector risk taking, management skills, and innovation capacity. Governments also need to develop the appropriate structures within the government to manage PPPs. The institutional setup for PPPs varies by country, but experience suggests that a central PPP unit, preferably at the Ministry of Finance (MoF), can serve as a useful vehicle to facilitate PPPs. A unit outside of the MoF can in principle handle the promoting functions of PPPs, but the MoF should act as “gate keeper.” This would imply that, at specific stages of the project cycle, the MoF’s approval should be required before a project can move ahead based on affordability and VfM considerations. To this end, governments need to strengthen their technical expertise to appraise, prioritize, and manage projects and ensure that PPPs are consistent with broader macro-fiscal objectives.

Table 11. Institutional Framework and Concession Renegotiations

Selected Institutional Factors	In percent in all renegotiations	Selected Renegotiation Outcome	In percent in all renegotiations
Regulation criteria			
Investment requirements (regulate by means)	70	Delays on investment obligation targets	69
Performance indicators (regulate by objectives)	18	Reduction in investment obligations	62
Regulatory framework		Extension of concession period	38
Price cap	42	Tariff increases	62
Rate of return	13	Increase of cost components with automatic pass-through to tariffs	59
Existence of regulatory body		Adjustment of fee payment to government	
In existence	17	favorable to operator	31
Not in existence	61	unfavorable to operator	17
Impact of legal framework		Changes in asset-capital base	
Embedded in law	17	favorable to operator	46
Embedded in decree	28	unfavorable to operator	22
Embedded in contract	40		

Source: Guasch (2004).

**The institutional framework affects the quality and outcome of PPP projects.** Given the complexities of large PPP projects, contracts are often incomplete, and therefore, many concession contracts are subject to renegotiations. Guasch (2004) find that most renegotiations are initiated by the private firms, and most renegotiations are associated with more favorable outcomes for them (Table 11). For example, more than 60 percent of the renegotiations results in delay or reduction of the private firms’ investment obligations, and about 60 percent leads to tariff increases or cost pass-through. However, the institutional framework, such as the legal and regulatory setups, significantly affect the incidence of renegotiations. For example, 61 percent of renegotiations occurs in the absence of a regulatory body, while only 17 percent occurs in the presence of a regulatory

body. Having a solid institutional framework, therefore, may provide an ex-ante incentive to promote better contracts to deliver the expected results in PPPs.

**A PPP policy framework has been established in a number of NMS.** In some cases, this has been done through official government resolutions. In the Czech Republic, for example, the government adopted a resolution for improving the legal environment and promoting PPPs.<sup>21</sup> A similar government resolution identifies the PPP strategy in Latvia.<sup>22</sup> In the Slovak Republic, a report issued by the MoF on the necessary conditions for the realization of PPP projects was approved by the government. In other cases, such as Bulgaria, a general framework can be identified in a series of published strategy papers aimed at improving the legal environment and promoting private sector participation. In several countries, however, a general PPP policy framework is lacking. Furthermore, even in countries in which an appropriate PPP policy framework exists, the existence of such a framework is not necessarily linked with an appropriate legal framework.

**The NMS are at different stages of developing an appropriate legal framework.**

Generally speaking, there is no one-to-one correspondence between the existence of a specific PPP/concession Law and the development of an appropriate legal framework. In Czech Republic, Estonia, and Slovenia, for example, there is no specific PPP/concession Law, and PPPs are regulated on the basis of other legislation. Still, the overall legal framework in these countries generally conform to international standards. The legal framework in Bulgaria and Lithuania is also fairly in line with international standards. By contrast in Hungary, a specific Concession Law exists, but the definition and scope of concessions are not clearly specified in the Law. Similarly, in Croatia the Concession Law is too general in the majority of core areas.<sup>23</sup>

**One area in which several NMS need to improve is in the selection of the concessionaire.** Although large sunk costs tend to reduce the scope for competition in the markets in which PPPs are usually undertaken, competition for the concession award is feasible and can increase the efficiency of the private partner. In very few NMS, however, the legal framework is conducive to competition in this area. An exception is Lithuania, where the law requires transparent and competitive procedures and includes sufficient operational guidance for the selection of bidders. Examples of countries in which compliance with best international standards are low—implying lack of transparency and inadequate selection procedures—include Croatia and Hungary.

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<sup>21</sup> The Government Resolution on Implementation of General policy of PPP, adopted in 2004.

<sup>22</sup> The Concept on the Facilitation of Concessions, approved by the Government in 2002.

<sup>23</sup> Core areas, as defined in the EBRD (2005a), include (i) general policy framework, (ii) general concession legal framework, (iii) definitions and scope of the concession law, (iv) selection of the concessionaire, (v) project agreement, (vi) security and support issues and (vii) settlement of disputes and applicable law.

**Regarding institutional setups, a number of NMS have established dedicated PPP units, but gateway processes are generally weak.** PPP units in NMS often have only an advisory role. Some countries have established PPP task forces or divisions either as interdepartmental groups or within line ministries, sometimes in relation to the management of a specific project. Examples include a PPP Division within the Ministry of Infrastructure in Poland, a PPP task force within the Ministry of Economy and Transport in Hungary, and a PPP unit within the Ministry of Transport, Post and Telecommunication in the Slovak Republic. In most cases, PPP units in NMS usually cannot support MoFs to act as gate keepers, thus ensuring that fiscal risks are properly taken into account at various stages of the PPP process. Some countries, however, are moving in this direction. In the Czech Republic, for instance, the PPP center mainly acts as a knowledge focus for promoting best practices and the necessary legislative reforms. The PPP center is expected to liaise with the MoF that retains the gate keeping functions.<sup>24</sup> Cyprus is also making progress in establishing an institutional setup with a strong role for the MoF.

**In countries where PPPs can be pursued by different levels of government, additional challenges arise.** Some NMS have strong subnational government levels. This can further complicate the PPP framework, since many PPPs are managed by local governments and the legal framework can be unclear regarding the division of responsibilities. For example, in the Czech Republic, the Act on Roads provides that a local road is the ownership of the municipality in which the road is located and contains restrictions regarding the transfer of full responsibility for operation and maintenance by the owner of a road to a third party. Since this ownership regime cannot be changed by contract, there is doubt as to whether a local authority (for example, the City of Prague) can enter in to a concession agreement with respect to a local road.

### **C. Fiscal Accounting and Reporting for PPPs**

**There are currently no internationally accepted comprehensive accounting and reporting standards in place for PPPs.** Country accounting practices for PPPs differ significantly and are often characterized by fairly lax standards. As a result, the use of PPPs has often been motivated by a desire to circumvent fiscal controls, including moving public investment off budget and debt off the government balance sheet. This has gone hand-in-hand with the emergence of government guarantees and contractual obligations that give rise to sizeable contingent liabilities that imply significant fiscal risks, but which are often not adequately accounted for nor disclosed.

**In the EU context, the 2004 Eurostat decision provides only a minimum standard to reflect the fiscal implications of PPPs** (Box 4). The private sector typically bears construction and availability risk, and the application of Eurostat's decision would therefore lead, in most cases, to the absence of recording of the fiscal implications of PPP

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<sup>24</sup> PPP Centrum a.s., a publicly owned company, was established in the Czech Republic in 2004 (see <http://www.pppcentrum.cz>).

projects. Applying Eurostat's decision will make it easier for government to record PPP projects as private investment, leading to significant fiscal risks. This simple "on-budget/off-budget" treatment provides strong incentives to design projects to "pass" the Eurostat test, allowing them to be recorded off budget, rather than to gear the design of projects toward the most efficient and appropriate allocation of risk, so as to achieve VfM. If a PPP project does not provide good VfM, i.e., if it is at least as costly as traditional public investment, the "gain" would simply be the postponement of expenditure, but at a higher overall cost over time. From an economic perspective, it would be difficult to justify recording such a project off budget.

**Box 4. The Eurostat Decision on PPPs**

Eurostat issued in 2004 a decision classifying the assets of PPP projects as public or private based on risk transfer, with implications for the accounting treatment. Eurostat's decision covers long-term contracts in areas where the private sector builds an asset and delivers services mainly to the government. According to Eurostat, PPP projects should be classified as non-government assets and recorded off balance sheet for the government under two conditions: (i) the private partner bears the construction risk; (ii) the private partner bears either availability or demand risk. When PPP projects involve limited risk transfer to the private sector, the project's assets would be classified as government assets. National statistics offices are responsible for adopting and implementing the Eurostat decision, based on information from project contracts.

**Hence, the IMF recommends that additional fiscal reporting requirements be met even if a PPP project is recorded as a private investment.** In general, classifying the assets of a PPP project as either public or private does not allow capturing the actual extent of risk transfer and risk sharing. The Eurostat approach does not do justice to the fact that PPP projects are essentially risk sharing arrangements that require each of the partners to assume and manage specific risks in the provision of infrastructure services. Therefore, the IMF recommends that budget documents report on PPP operations, even when projects are classified as private (Box 5). In addition, the fiscal implications of PPPs should be reflected in medium-term budgets and debt sustainability analysis. This will require governments to strengthen their ability to assess risks from contingent obligations.

**Most NMS currently do not follow best practices for transparent disclosure of the fiscal implications of PPPs.** The fiscal implications of PPPs (for example, in terms of expenditures linked to availability payments) are usually not explicitly identified, and budgetary documents do not usually include PPP annexes. Furthermore, while some countries (such as Bulgaria and Hungary) include some information on contingent liabilities in budget documents, this is usually limited to government guaranteed debt. In Hungary, the budget documents contain a summary table of PPP operations, their total expected costs, and the estimated impact of associated availability fees on the budget in the coming three years. However, fiscal risks stemming from PPPs are not transparently disclosed. Overall, capacity to identify contingent liabilities implied by PPPs is very low to non-existent in NMS. Capacity in this area should be increased, also in view of the fact

that the trade-off faced by governments in establishing the degree of risk transfer to the private partner can generate significant contingent liabilities.

#### **D. PPPs in NMS: The Way Forward**

**NMS have a long way to go in building appropriate institutional frameworks for PPPs and addressing related fiscal risks.** As discussed above, PPPs are generally not imbedded in a strong framework of public investment planning that allows the selection of sound investment projects based on CBA. In addition, PPPs are not being pursued on account of VfM considerations and are not integrated with the government's medium-term fiscal framework and budget cycle. These facts, combined with generally lax fiscal accounting and reporting standards, encourage the use of PPPs as a means to by-pass budget controls and move expenditure off budget and liabilities off the government balance sheet. However, governments are left facing significant fiscal risks, which have, in many instances, already materialized in sizable fiscal costs. Several aspects of the legal and institutional framework are also in need of attention. Concession laws have been adopted by a majority of countries, but there is no track record of proper implementation yet. Regarding institutional setups, while progress has been made in building dedicated PPP units, the role of the MoF in the PPP process needs to be strengthened considerably to implement gateway processes.

### **Box 5. Disclosure Requirements for PPPs and Guarantees**

#### **PPPs**

For each PPP project or group of similar projects, budget documents and end-year financial statements should provide information on the following:

- Future service payments and receipts (such as concession and operating lease fees) by government specified in PPP contracts over the following 5–30 years.
- Details of contract provisions that give rise to contingent or variable payments or receipts (e.g., guarantees, shadow tolls, profit sharing arrangements, events triggering contract renegotiation), which need to be valued to the extent feasible.
- Amount and terms of financing and other support for PPPs provided through government on-lending or via public financial institutions and other entities (such as special purpose vehicles (SPVs) owned or controlled by the government).
- Information on how the project affects the reported fiscal balance and public debt, and whether PPP assets are recognized as assets in the government balance sheet. It should be noted whether PPP assets are recognized as assets on the balance sheet of any SPV or private sector partner.<sup>1</sup>

#### **Guarantees**

Irrespective of the basis of accounting, information on guarantees should be disclosed in budget documents, within-year fiscal reports, and end-year financial statements. Guarantees should ideally be reported in a *Statement of Contingent Liabilities* which is part of the budget documentation and accompanies financial statements, with updates provided in fiscal reports. Information to be disclosed annually for each guarantee or guarantee program includes:

- A brief description of its nature, intended purpose, beneficiaries, and expected duration.
- The government's gross financial exposure and where feasible, an estimate of the likely fiscal cost of called guarantees.
- Payments made, reimbursements, recoveries, financial claims established against beneficiaries, and any waivers of such claims.
- Guarantee fees or other revenue received.

In addition, budget documents should provide:

- An indication of the allowance made in the budget for expected calls on guarantees, and its form (e.g., an appropriation, a contingency).
- A forecast and explanation of new guarantees to be issued in the budget year.

During the year, details of new guarantees issued should be published (e.g., in the Government Gazette). Within-year fiscal reports should indicate new guarantees issued during the period, payments made on called guarantees, and the status of claims on beneficiaries, and update the forecast of new guarantees to be issued in the budget year and the estimate of the likely fiscal cost of called guarantees.

Finally, a reconciliation of the change in the stock of public debt between the start and end of the year should be provided, showing separately that part of the change attributable to the assumption of debt arising from called guarantees.

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<sup>1</sup>The suggested disclosure of the private sector partner's accounting treatment has been made by Heald (2003). While there is no question of enforcing symmetrical accounting treatment by the government and private sector, any lack of symmetry may point to areas worthy of scrutiny, especially if no part of the PPP assets is on either balance sheet.



## V. CONCLUDING REMARKS

**Fiscal adjustment in NMS has not necessarily constrained investment in general or public investment in particular.** Some countries managed to increase public investment with the support of higher revenue efforts and cuts in other expenditures. In addition, fiscal adjustment can also help stimulate private-sector led growth. For example, countries with strong fiscal positions and modest debt have generally been able to stimulate higher private investment to more than offset cuts in public investment. A solid fiscal stance also promotes private investment and foreign capital inflow to support investment and growth. Finally, the successes in achieving the convergence objective requires higher efficiency in investment, which can be facilitated by properly designed fiscal adjustments.

**Upgrading infrastructure to support growth requires both institutional reform and investment measures.** Raising total investment and the efficiency of these investments are both important in addressing bottlenecks in infrastructure. While raising public investment is important in some countries, institutional reforms also have a critical role to improve efficiency and encourage private sector participation to raise total investment. Therefore, the policy options will need to be country specific with due consideration to the overall macroeconomic and fiscal framework, infrastructure bottlenecks and business constraints, and the efficiency of investment.

**New available financing presents both opportunities and challenges and highlights the need for improving the related institutions.** While new EU Funds makes additional resources available for investment, the net fiscal impact may be negative in the short run, unless countries are able to substantially reallocate spending away from domestically-funded programs. The appropriate selection of projects is therefore crucial to ensure that critical national priorities are addressed first. The effective use of these additional resources also pose challenges regarding the absorption capacity in the NMS. Similarly, while PPP provides a promising route for channeling more resources into infrastructure investment, strengthening the institutional framework for PPPs and limit incentives to simply move investment off budget is important to deliver on the expected benefits and adequately manage the complexities and risks inherent in this procurement route.

## **Appendix I: EU Funding Available to NMS**

### **Pre-accession aid**

Aimed to facilitate adjustment to full membership. The disbursements on remaining pre-accession funds continues also after accession. There were three pre-accession instruments:

- *Poland and Hungary: Assistance for Restructuring of the Economy (PHARE)*;
- *Instrument for Structural Policies for pre-Accession (ISPA)*;
- *Special Accession Program for Agriculture and Rural Development (SAPARD)*.

### **Structural funds**

Aimed at the following objectives: (1) economic catch-up in less developed regions (GDP per capita less than 75 percent of EU average, (2) economic and social cohesion in areas facing structural difficulties (e.g., rural, fisheries); (3) training and promotion of employment (in less developed regions included in (1)). These three objectives account for 94 percent of structural allocations for the NMS. There are four structural funds to finance the above objectives:

- *European Regional Development Fund (ERDF)*: financing objectives (1) and (2)
- *European Social Fund (ESF)*: financing objectives (1), (2), and (3)
- *European Agricultural Guidance and Guarantee Fund (EAGGF)—guidance section*: financing objective (1) in agriculture;
- *Financial Instrument for Fisheries Guidance (FIFG)*: financing objective (1) in the fisheries sector.

Other structural funds, so called Community Initiatives, include: *Interreg III* (cross-border cooperation), *Urban II* (innovative strategies in urban areas), *Equal* (combating labor market discrimination), and *Leader +* (rural development initiatives).

### **Cohesion Fund**

Available to countries with GDP per capita below 90 percent of the EU average. This finances large infrastructure projects in environment and transportation.

### **Common Agricultural Policy (CAP)**

The CAP policy has several components:

- *market measures*: purchase of unprocessed food at intervention price and subsidies to non-EU exports;
- *direct payments*: payments to farmers based on farm area and type of production;
- *rural development (EAGGF guarantee section)*: so called CAP pillar II to provide support to farms in less favorable areas (LFA), forestation of land, structural pensions (paid to those who transfer farms to young farmers), food-processing, or training of farmers.

### **Internal policies**

Funds to finance existing EU policy priorities, NMS mainly receive funds for:

- *nuclear safety*: for decommissioning of power plants;

- *Schengen*: to strengthen control on the EU border and comply with the Schengen Treaty.

**Budget compensation**

Unconditional payment from the EU agreed at the last stage of the accession negotiations. Its main goals are to ensure that new members would not become net contributors, and to improve budget liquidity in countries where there is no such risk. This is not a “regular” EU funding vehicle (it will not continue after 2006). This transfers is in part financed directly from the EU budget and in part with resources shifted from structural funds originally allocated for the new member states.

Source: Rosenberg and Sierhej (forthcoming)

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