PPI data update note 21 **March 2009**

New private infrastructure projects in developing countries continue to take place but projects are being affected by the financial crisis[1]

Summary: Throughout the financial crisis, new private activity has continued to take place in developing countries with projects being tendered and brought to financial closure. In the first months of the full-scale of the financial crisis (Aug—Nov 2008), the rate of project closure was 26% lower than in the same period in 2007. However, since then private activity recovered and the project closure rate in Aug—Dec 2008 was just 15% lower than in the same period in the previous year. The slowdown reflects an initial impact of the financial crisis which has made financing (both debt and equity) more onerous and difficult to secure. Infrastructure projects are facing higher cost of financing, and lower demand for infrastructure services is beginning to impact some sectors. The major impact to date is projects being delayed, and, to a lesser extent, cancelled. Transport and energy are the worst affected sectors so far, while ECA and upper middle income countries are the most affected groups of countries.

Many projects that reached financial closure in the last six months were at an advanced stage of raising finance or able to secure finance from local public banks, and bilateral and multilateral agencies. However, it is unlikely under the current trends that local financing institutions together with bilateral and multilateral financing institutions will have the capacity to fully replace other sources of financing.

Developing country governments' continuing commitment to their PPP programs is shown by the number of new projects tendered and awarded in the last six months. However, the current financial and economic conditions are forcing governments and investors to reassess some projects.

It is too early to assess the full impact of the crisis on new PPI projects. Financial markets remain volatile while the financial crisis has now turned into a global economic crisis. As the "flight to quality" sets in for banks and other financiers, the likely impact will be more stringent financial conditions, not only via higher cost of financing but also with lower debt/equity ratios, reduced maturities and more conservative risk allocation structures.

Trends in new infrastructure projects with private participation: Before the financial crisis, PPI in developing countries was booming with investment commitments (hereafter "investment") growing in all sectors except water and sewerage. Total investment to PPI projects in developing countries grew by 150% to US$158 billion between 2003 and 2007. Since then the financial crisis has made it more difficult to implement PPI projects. A recent survey on new PPI projects shed some light on the short-term impact of the financial crisis.[2]

1. PPI projects continue to reach closure but at a slower pace than that of 2007:[3] From Aug to Dec 2008, 107 PPI projects reached financial or contractual closure with investment commitments (hereafter "investment") of US$35.8 billion in 36 developing countries. Those

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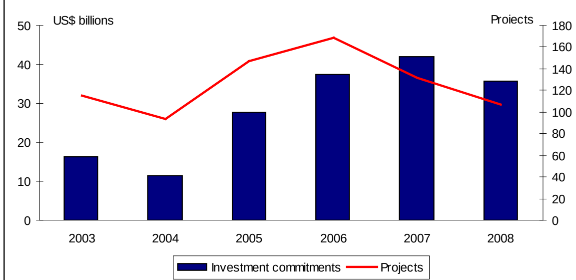
[1] The note was produced by Ada Karina Izaguirre, infrastructure specialist in the Finance, Economics, and Urban Development Department (FEU), Sustainable Development Network, World Bank. The PPI database team collected project data.

[2] This note relies on data compiled in the "impact of the financial crisis on PPI" database, which includes 315 infrastructure projects with private participation in developing countries which were trying to raise financing on project finance basis or were in advanced tender stage between Aug 2008 and Jan 2009. The crisis impact database uses the same sector and type of project criteria as the PPI Project Database. But numbers of both databases are not directly comparable. The crisis impact database includes projects before financial or contractual closure while the PPI Project Database, which is annually updated, includes only projects that have reached such closure. In addition, the crisis impact database does not include projects previously implemented whose investment programs could be affected by a higher cost of financing and lower demand. Those projects represented over 50% of total investment commitments in 2004-07 as reported by the PPI project database.

[3] Data on projects reaching closure in Jan-Jul 2008 as well as additional investment in existing PPI projects are being collected and will be released by the end of the summer 2009.

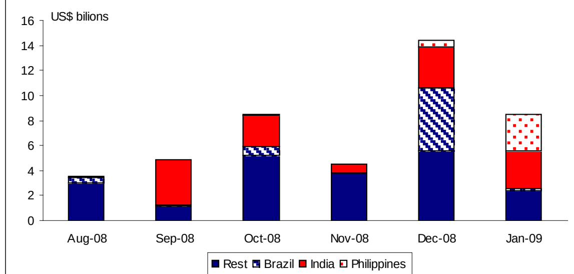
levels represent a decline of 15% by investment and 20% by number of projects compared with the levels in the same period in 2007 (figure 1). Such investment drop is lower than the 26% reported in Aug to Nov 2008 thanks to strong activity in Dec 2008—the highest level of investment for that month since the late 1990s.[4] Activity also seemed to recover in Jan 2009 when 13 new PPI projects amounting to US$8.5 billion reached closure, again a level not seen in that month since the late 1990s. However, a few large projects in two countries drove investments in December (Brazil and India) and January (India and Philippines) (figure 2).

Figure 1 Infrastructure projects with private participation that reached closure in developing countries in Aug-Dec, 2003–08



Source: World Bank and PPIAF, PPI Project and Impact of financial crisis on PPI databases.

Figure 2 Investment commitments to new infrastructure projects with private participation in main recipients and rest of developing countries*



Source: World Bank and PPIAF, Impact of the financial crisis on PPI

* Projects that reached financial or contractual closure in the indicated month.

2. Projects are being impacted through higher cost of financing, project delays and cancellations: The increased cost of financing is quoted as a major impact of the crisis in less than 2% of surveyed projects by investment. However, anecdotal information suggests the infrastructure projects are being affected by the higher cost of funding. The survey's findings seem to reflect the limited available information on cost of funding rather than the actual impact. A recent ITU report indicates that telecommunications companies' debt issuances are "being secured at spreads of up of 4.75% in late 2008, 3-4% higher than the financing available pre-crisis". [5] The higher cost of funding is not surprising given the credit market conditions and favorable terms that were being offered to infrastructure projects during the pre-crisis period.[6]

The data, however, confirm that many projects are being postponed or cancelled due to the crisis, corroborating the evidence of a slowdown in PPI projects reaching financial closure. Projects delayed and at risk of being delayed amount to US$81 billion. As a point of reference, 288 new projects involving investment of US$73 billion reached financial closure in 2007. Around 20% of surveyed projects by investment have been delayed (16%), canceled (2%), or are at risk of being canceled (2%). In addition, 25% of projects by investment are at risk of being delayed if financing is not put in place in the coming months.

Competition to attract financing will increase as a growing backlog of projects attempt to raise financing. There is a growing number of PPI projects trying to raise funds in the next 12 months that will be affected if financial markets do not recover soon. Around 68 projects involving investment of US$59 billion, which were not able to secure financing by January 2009, are expected to continue looking for finance. There are also 83 recently awarded projects with investment of US$54 billion which will be trying to raise financing in the next six to 12 months. These projects will face a challenging environment as net private capital flows to developing countries in 2009 are expected to be just one third of the 2008 level, which itself was just one-half the peak level seen in 2007.[7]

3. The rate of project closure varies significantly across sectors with transport, energy and water reporting lower investments and telecom seeing stable investments.

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4 The decline in Aug-Nov 2008 is lower than the initially 40% reported thanks to better project data in India.

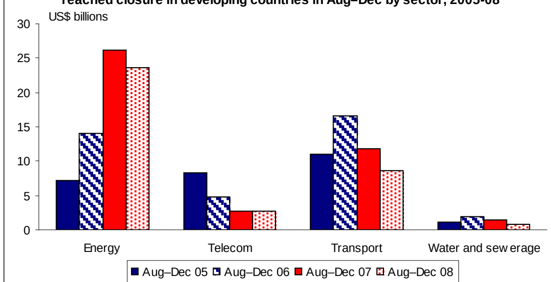
5 ITU, Confronting the crisis: Its impact on the ITC Industry, Feb 2009.

6 Richard Abadie, Infrastructure finance – surviving the credit crunch, PricewaterhoseCoopers, Dec 2008.

7 Institute of International Finance, Capital flows to emerging market economies, Jan 2009.

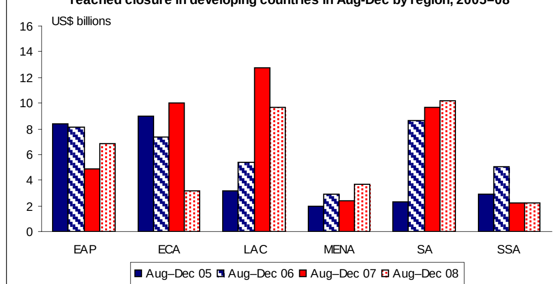
Transport is so far the most affected sector with just 24 projects and investments for US$11.7 billion reaching closure in Aug to Dec 2008. Such level of activity represents a 26% decline by investment volume compared with the 2007 level (figure 3). The energy sector saw 51 projects with investments for US$23.5 billion reaching closure in Aug to Dec 2008, a 10% decline by investment compared with the level reached in the same period in 2007. Despite that decline, energy investment in 2008 was still the second highest for that period since the late 1990s. Water and sewerage saw the same number of projects reaching closure in late 2008 as in 2007 (28 projects), but associated investment declined from US$1.4 billion to US$850 million. Telecom—for which new projects represent just a fraction of annual investments—had 6 projects with investments for US$2.7 billion reaching closure, a similar level of investments than in 2007. Existing telecom operators in developing countries are also yet to be affected by the financial crisis. The ITU report concludes that investment programs, particular of mobile operators, have not changed much as a result of the financial crisis. Many operators, particularly the large ones, are cash-generating operations with the ability to finance network rollouts while others are looking for alternative sources of funding such as vendor financing.

Figure 3 Investment commitments to infrastructure projects that reached closure in developing countries in Aug–Dec by sector, 2005-08



Source: World Bank and PPIAF, PPI Project and Impact of financial crisis on PPI databases.

Figure 4 Investment commitments to infrastructure projects that reached closure in developing countries in Aug-Dec by region, 2005–08



Source: World Bank and PPIAF, PPI Project and Impact of financial crisis on PPI databases.

Energy and transport together account for almost all delayed projects and projects at risk of being delayed. Among surveyed energy projects, 42% of total investment in those projects have been delayed (12%) or are at risk of being delayed (30%). In addition, around 42% of total investment in surveyed transport projects have been delayed (23%) or are at risk of being delayed (19%). Airports, ports, and railways are the most affected subsectors in relative terms. The impact on these subsectors is not surprising given that they have already started feeling the impact of lower demand. A recent World Bank report indicated that "28 out of 38 economies reporting November export data show double-digit declines relative to the same month in the previous year". Data from Airport Council International report declining passenger traffic in all developing regions in Nov-Dec 2008 as compared to the same period in 2007. Before the financial crisis annual worldwide passenger traffic was growing at a rate between 5 and 7% in 2004-07. Due to the airport traffic declines in the last two months of 2008, worldwide passenger traffic remained flat in 2008 while freight traffic fell 4.3% as compared to 2007. Energy projects are also beginning to be affected by lower demand. For instance, Thailand has delayed four of the five recently awarded independent power producers due to the expected lower electricity demand growth as a result of the financial and economic crisis.

There is anecdotal information that investors and financiers are increasingly worried about the impact of the crisis on project demand and consumers' ability to pay. Projects whose revenues come from government payments such as annuity payments, shadow tolls, and power purchase agreements are having easier access to finance than projects relying on user fees.

4. The rate of project closure varies across developing regions with ECA and LAC reporting lower investments, SSA seeing stable investments, and EAP, MENA, and SA attracting higher investments. ECA had investments for US$3.1 billion in Aug-Dec 2008, a 70% declined with respect to the same period in 2007(figure 4). Even when the 2007 electricity divestitures in the Russian Federation are excluded, ECA reports a 27% decline in investment. LAC had investment in new projects for US$9.7 billion, a 24% decline respect to the level in the same period in 2007. SSA had investments in new projects for US$2.2 billion, a level similar to that of 2007. South Asia had investments for US$10.2 billion, a 6% increase with respect to the same period in 2007. EAP and MENA also reported growing investments but from low levels.

South Asia and ECA, the two developing regions that led the PPI recovery in 2004–07, have the largest number of projects delayed or at risk of being delayed. In South Asia, 46% of investment in surveyed projects are delayed (7%) or at risk of being delayed (39%). In ECA, 49% of surveyed projects are delayed (18%) or at risk of being delayed (31%). Similar slowdown was experienced after crises of the late 1990s in developing countries. EAP and LAC, the leading PPI regions in the 1990s, saw major investment declines after those crises. Although regional experiences vary, the most active regions in booming periods seem to be the most affected by economic and financial crises, defining the slowdown across developing regions.

5. The rate of project closure also varies across income groups with upper middle income countries reporting lower investments, lower middle income countries attracting higher investments, and low income countries seeing stable investments.[8] Upper middle income countries had investments for US$12.2 billion in Aug-Dec 2008, a 44% decline with respect to the same period in 2007 (figure 5). Lower middle income countries had investments for US$10.8 billion, a 40% increase with respect to the same period in 2007 and a return to levels experienced in 2005-06. Low income countries had investments for US$12.8 billion, a 3% increase compared with the same period in 2007. However, India accounts for most of the growth in this group. Once India is excluded, low income countries report investment for US$2.6 billion, a 20% decline with respect to the same period in 2007.

Upper middle income countries had the highest share of projects that were delayed, but seemed to be less vulnerable to new delays than projects in low-income countries. In upper middle income countries, 25% surveyed projects (by investment) are delayed, but only 17% are at risk of being delayed. Conversely in low income countries, only 7% of investment in projects is already delayed but 35% were at risk of being delayed. India accounts for most of that delay in low income countries. In lower middle income countries, 38% of investment in surveyed projects are delayed (15%) or at risk of being delayed (23%). The hardest impact on upper middle income countries is not surprising because they are more exposed to international capital flows.

By World Bank lending category, IBRD countries were the only group reporting an investment drop. In Aug-Dec 2008, IBRD countries reported investments worth US$22 billion, a 24% decline with respect to the same period in 2007 (figure 6).[9] The two other groups (blended and IDA countries) saw investment levels similar to those in the previous two years.

6. Governments are taking measures to facilitate funding for PPI projects while local sector public banks as well as multilateral and bilateral agencies continue to be key finance providers: So far Brazil and India have been the most active on facilitating financing. In January 2009, the government of Brazil secured US$42.6 billion in additional funding for national development bank BNDES to finance infrastructure projects as well as other sectors such as oil. India has taken a series of measures to increase financing for private infrastructure projects. The Indian government has allowed IIFCL, a public infrastructure finance company, to facilitate long term funding for infrastructure by assuming subordinate debt. It has also increased the investment cap for insurance companies on infrastructure from 10 to 20%. For some key projects, the concession periods have been extended from 12, 15, and 20 years to 20 or 30 years. For other projects, the approved costs have been increased by 15%, meaning the government contribution to the project (through viability gap funding for infrastructure PPPs) could be increased. India is also contemplating frontloading the viability gap funding payments. Projects in Brazil and India, which account for a large share of private activity, continue to source funding largely from public sector banks. Funding from multilateral and bilateral agencies

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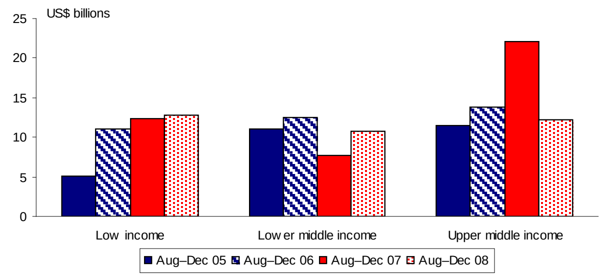
[8] By income group, surveyed countries are classified in low income (2007 GNI per capita of US$935 or less), lower middle income (US$936–US$3,705), and upper middle income (US$3,706–US$11,455).

[9] By WB lending category, surveyed countries are classified in IDA countries (a per capita income in 2007 of less than $1,095 and lack the financial ability to borrow from IBRD), blended countries (eligible for IDA loans because of their low per capita incomes but are also eligible for IBRD loans because they are financially creditworthy), and IBRD countries (IBRD loans are noncessional).

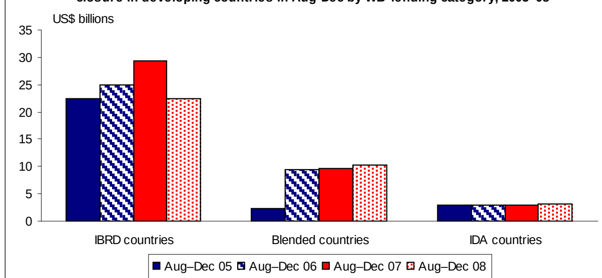
is also being mobilized. Of the 120 projects that reached financial closure, these agencies provided direct financing to at least 21 projects, with investment totaling US$9.4 billion. The agencies are also working on new projects. Of the 69 projects looking for finance, the agencies are so far evaluating funding for at least 11 projects with investment of US$4.8 billion.

Figure 5 Investment commitments to infrastructure projects that reached closure in developing countries in Aug-Dec by income group, 2005–08



Source: World Bank and PPIAF, PPI Project and Impact of financial crisis on PPI databases.

Figure 6 Investment commitments to infrastructure projects that reached closure in developing countries in Aug-Dec by WB lending category, 2005–08



Source: World Bank and PPIAF, PPI Project and Impact of financial crisis on PPI databases.

7. Countries continue to tender/award new PPI projects: The surveyed projects show that 29 developing countries awarded 83 projects which involved US$54 billion in investments in Aug 2008 to Jan 2009. Those projects were primarily in energy (42 projects for US$30.8 billion) and transport (31 projects for US$20 billion) but also in telecom (6 projects for US$2.9 billion) and water and sewerage (four projects for US$200 million).Those projects were located in all developing regions, but primarily in ECA (20 projects for US$22.7 billion), LAC (30 projects for US$11.9 billion), and South Asia (15 projects for US$10.5 billion). In addition, there are at least 28 projects in final tender stage (to be awarded in the next three months), representing investments of US$17.9 billion.

The continued flow of projects shows sustained investor interest in acquiring new PPI/PPP projects. Several recently tendered projects had at least three final bids. In addition, anecdotal information suggests that investors with financial strength have strong interest in acquiring new or distressed assets.

Conclusion: Although it is still too soon to assess the full impact of the current crisis on new PPI projects, there is strong evidence of lower rates of financial closure and projects being postponed and canceled, mainly in energy and transport. However, rate of project closure has recovered in December and January while the impact of the crisis varies across developing regions and country income groups with ECA and upper middle income countries being the most affected groups of countries so far. This preliminary analysis will be further refined in the coming months to assess whether these trends continue.

Table 1 Infrastructure projects with private participation awarded, raising financing or in advance stage of tender by project status and impact of the financial crisis in Aug 2008–January 2009

	Impact of crisis*								
Project status	No major impact reported	Raised financing but at a higher cost	Project restructuring	Delayed	Delayed potentially (mainly due to the crisis)	Delayed potentially (more than the crisis)	Canceled	Canceled potentially (more than the crisis)	Total
Awarded	53	-	-	1	27	-	1	-	82
Closed financing	112	5	1	1	-	-	1	-	120
Looking for financing	14	2	1	16	26	7	1	1	68
Tender in progress	17	-	2	2	6	1	-	-	28
Tender delayed	1	-	1	5	1	1	-	-	9
Tender canceled	3	-	-	1	-	-	3	1	8
Total	**200**	**7**	**5**	**26**	**60**	**9**	**6**	**2**	**315**

* The delayed and canceled categories include a few projects for which other reasons than the crisis played a key role.
Source: World Bank and PPIAF, Impact of the financial crisis on PPI database.

Table 2 Investment commitments to infrastructure projects with private participation awarded, raising financing or in advance stage of tender by project status and impact of the crisis in Aug 2008–January 2009
(US$ million)

	Impact of crisis*								
Project status	No major impact reported	Raised financing but at a higher cost	Project restructuring*	Delayed*	Delayed potentially (mainly due to the crisis)	Delayed potentially (more than the crisis)	Canceled*	Canceled potentially (more than the crisis)	Total
Awarded	31,481				21,199		450		53,579
Closed financing	41,377	2,259	546	546			9		44,279
Looking for financing	11,140	1,030	100	100	25,426	5,812	1,900	3,500	59,243
Tender in progress	3,833		7,500	7,500	2,369	-			17,902
Tender delayed	762		2,919	2,919	-	450			15,878
Tender canceled	900						644	363	7,207
Total	89,492	3,289	11,065	32,120	48,994	6,262	3,003	3,863	198,089

* The delayed and canceled categories include a few projects for which other reasons than the crisis played a key role. In addition, projects delayed for reasons no related to the financial crisis are not reported in the impact of the financial crisis on PPI database.
Source: World Bank and PPIAF, Impact of the financial crisis on PPI database.

Table 3 Investment commitments to infrastructure projects with private participation awarded, raising financing or in advance stage of tender by region and impact of the crisis in Aug 2008–January 2009*
(US$ million)

Impact of crisis	EAP	ECA	LAC	MENA	SA	SSA	Total
No major impact reported	17,128	14,3178	25,565	4,674	24,386	3,422	89,492
Raised financing but at a higher cost	1,916	-	989	-	-	385	3,289
Project restructuring*	-	8,046	100	-	2,919	-	11,065
Delayed*	6,190	9,750	11,747		4,433		32,120
Delayed potentially (mainly due to the crisis)	2,260	16,000	3,582	2493	23,758	-	48,994
Delayed potentially (more than the crisis)	750	-	-	-	5,512.	900	6,262
Canceled*	9.	644	1,900	-	-	-	3,003
Canceled potentially (more than the crisis)	-	3,500	363	-	-	450	3,863
Total	28,253	52,258	44,245	**7,167**	61,008	**5,157**	198,089

* The delayed and canceled categories include a few projects for which other reasons than the crisis played a key role. In addition, projects delayed for reasons no related to the financial crisis are not reported in the impact of the financial crisis on PPI database.
Source: World Bank and PPIAF, Impact of the financial crisis on PPI database.

Table 4 Investment commitments to infrastructure projects with private participation awarded, raising financing or in advance stage of tender by sector and impact of the crisis in Aug 2008–January 2009*
(US$ million)

Impact of crisis	Energy	Telecom	Transport	Water and sewerage	Total
No major impact reported	54,241	6,955	26,792	1,504	89,492
Raised financing but at a higher cost	2,759	-	530	-	3,289
Project restructuring*	646	-	10,419	-	11,065
Delayed*	13,622		18,498		32,120
Delayed potentially (mainly due to the crisis)	33,777	-	15,146	-	48,994
Delayed potentially (more than the crisis)	1,809	-	4,453	70	6,262
Canceled*	450	-	2,544	9	3,003
Canceled potentially (more than the crisis)	3,500	-	363	-	3,863
Total	110,804	**6,955**	78,746	**1,584**	198,089

* The delayed and canceled categories include a few projects for which other reasons than the crisis played a key role. In addition, projects delayed for reasons no related to the financial crisis are not reported in the impact of the financial crisis on PPI database.
Source: World Bank and PPIAF, Impact of the financial crisis on PPI database.