PPI data update note 35 **February 2010**

Assessment of the impact of the crisis on new PPI projects – Update 5

New private infrastructure activity in developing countries recovered selectively in the third quarter of 2009

Summary. Investment commitments to infrastructure projects with private participation (PPI projects) reaching closure in developing countries grew by 22% in the third quarter of 2009, and by 10% in the first three quarters of the year, compared with the same periods of 2008. These growth rates indicate a strong recovery from the 54% decline in the second half of 2008 compared with the same period of 2007. But investment grew selectively, concentrated in large energy projects in a few countries—Brazil, India, and Turkey. The Russian Federation, by contrast, saw a sharp decline in investment as a result of the global financial crisis and the end of the RAO UES privatization program. If these four countries were excluded, investment in developing countries would have fallen by 49% in the third quarter of 2009, and by 5% in the first three quarters, compared with the same periods of 2008. Among sectors, energy was the only one with investment growth in 2009, thanks to activity in greenfield power plants. Across sectors, large projects (US$500 million or more) accounted for the investment growth. Private activity as measured by number of projects remained slower than before the full onset of the financial crisis. The number of projects reaching closure was 27% lower in the third quarter of 2009, and 10% lower in the first three quarters, than in the same periods of 2008. These trends suggest greater project selectivity. Indeed, the large projects that are reaching closure are characterized by strong economic and financial fundamentals and the backing of financially solid sponsors and governments.

Local public banks as well as bilateral and multilateral agencies continue to be key sources of finance, providing a critical amount of funding. But these institutions are unlikely to have the capacity to fully replace other sources of financing. Greater project selectivity is therefore expected to continue for some time. Commercial bank lending remains constrained, and the choices of investors and financiers continue to reflect the "flight to quality." New projects are facing higher financing costs—a problem compounded by the lower demand affecting some sectors. For projects able to raise financing, the conditions are more stringent, with lower debt/equity ratios, shorter tenors, and more conservative structures.

As a result, some planned private infrastructure projects are being delayed, restructured, or, to a lesser extent, canceled. Transport continues to be the sector most affected, and Europe and Central Asia the developing region most affected. But while the financial crisis continues to slow new project closures, its impact on implementation is declining, and other issues are becoming more significant in project delays. Despite the more difficult environment, developing country governments remain committed to their public-private partnership (PPP) programs, as confirmed by the number of new projects being tendered, awarded, and restructured. And infrastructure sponsors are looking for new sources of funding, such as local capital markets.

Trends in new infrastructure projects with private participation.[1] This review of new PPI projects sheds some light on the recent activity and on the short-term impact of the financial crisis.[2]

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 Project Database team gathered project data.

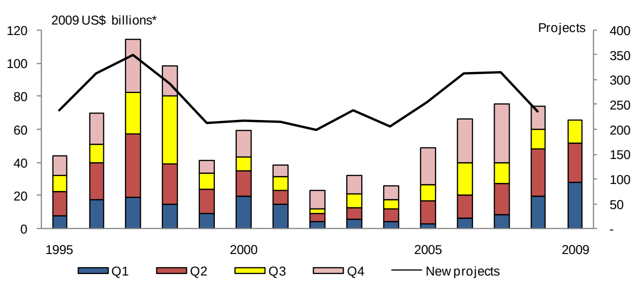
[1] The note focuses on private participation in infrastructure and therefore does not analyze the impact of stimulus packages, which in most cases have been directed to public infrastructure projects.

[2] This note relies on data compiled in the "impact of the financial crisis on PPI" database, which includes 843 infrastructure projects with private participation in developing countries that were trying to raise financing on a project finance basis or were at an advanced stage of tender between January 2008 and September 2009. The crisis impact database uses the same definitions for sectors and project types as the PPI Project Database. But numbers in the two databases are not directly comparable. The crisis impact database includes projects that have not yet reached financial or contractual closure, while the PPI Project Database, which is updated annually, includes only projects that have

The note incorporates two improvements over the previous updates on the impact of the crisis: a larger sample size (843 projects, up from 714 in the previous update) over a longer period (from January 2008 through September 2009, rather than, as in the previous update, through June 2009).[3] The findings of the survey follow.

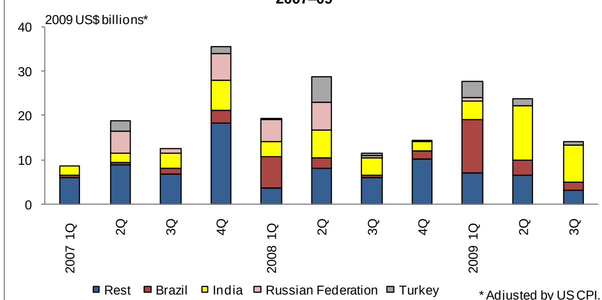
1. Investment in new PPI projects continues to recover, but the revival has been selective. In the third quarter of 2009, 38 PPI projects with investment commitments (hereafter, *investment*) of US$14.1 billion reached financial or contractual closure in 16 developing countries.[4] This investment level represents a 22% increase from that reported in the third quarter of 2008 and suggests that the recovery in PPI investment experienced earlier in the year continues (figure 1). In the first three quarters of 2009, 163 PPI projects with investment of US$65.7 billion reached financial or contractual closure in 43 developing countries. Investment was up 10% from the level reported in the first three quarters of 2008.

Figure 1 Investment commitments to PPI projects reaching closure in developing countries, by quarter, 1995–2009



Note: Includes only investment commitments at financial or contractual closure. Does not include additional investment in subsequent quarters.
* Adjusted by US CPI.
Source: World Bank and PPIAF, PPI Project and Impact of the crisis on PPI databases.

Figure 2 Investment commitments to PPI projects reaching closure in main recipients and rest of developing countries, by quarter, 2007–09



* Adjusted by US CPI.
Source: World Bank and PPIAF, PPI Project and Impact of the crisis on PPI databases.

But a closer look at the data reveals a more nuanced picture. First, similar to the trend in the first two quarters of 2009, investment in the third quarter was concentrated in Brazil, India, and Turkey (figure 2). These three countries accounted for 78% of the investment and all the investment growth in the third quarter. By contrast, Russia saw a sharp decline in investment because of the financial crisis—which hit the country hard—and the end of the privatization program for the RAO UES generating assets. Thus even without the crisis, investment in Russia would have declined unless another major privatization or PPP program had been implemented. If Brazil, India, Turkey, and Russia were excluded, investment in developing countries would have fallen by 49% in the third quarter of 2009, and by 5% in the first three quarters, compared with the same periods of 2008.

Second, larger projects drove investment growth in the first three quarters of 2009 (figure 3). Investment in projects of US$1 billion or more increased by 40% compared with the first three quarters of 2008, to US$36 billion. Investment increased by 100% for projects of US$500 million or more but less than US$1 billion, to US$14.4 billion. By contrast, investment in projects of less than US$500 million dropped by 30%, to US$15.3 billion.

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reached closure. In addition, the crisis impact database does not include previously implemented projects, whose investment programs could also be affected by a higher cost of financing and lower demand. As reported by the PPI Project Database, these projects accounted for more than 50% of total investment commitments in 2004–07.

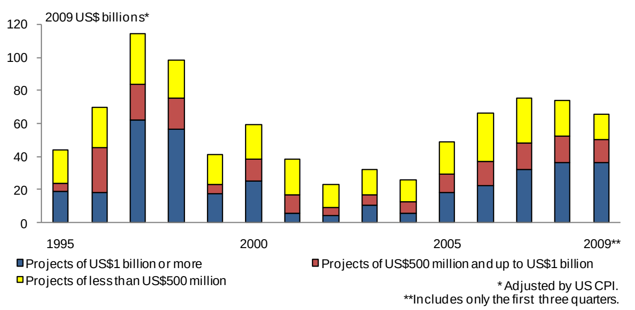
[3] The review summarizes project data as reported by the media and other public sources and includes primarily medium-size and large projects. Small-scale projects are generally not included because of a lack of public information.

[4] The definition of financial or contractual closure varies among contract types. For greenfield projects, financial closure is defined as the existence of a legally binding commitment of equity holders or debt financiers to provide or mobilize funding for the full cost of the project. If project construction begins with partial funding, projects are included when project construction is significantly advanced (25% complete). For concessions, contractual closure is reached when the concession agreement is signed. For divestitures, closure is reached when the equity holders have a legally binding commitment to acquire the assets. For management and lease contracts, a contract authorizing the commencement of management or lease service must be signed, with the private consortium assuming the operation of the services.

Third, the number of projects reaching closure in developing countries fell by 27% in the third quarter of 2009, and by 10% in the first three quarters, compared with the same periods of 2008 (figure 4). If Brazil, India, Turkey, and Russia were excluded, the decline would have been even more pronounced for the third quarter of 2009 (36%) but similar for the first three quarters of the year (9%).

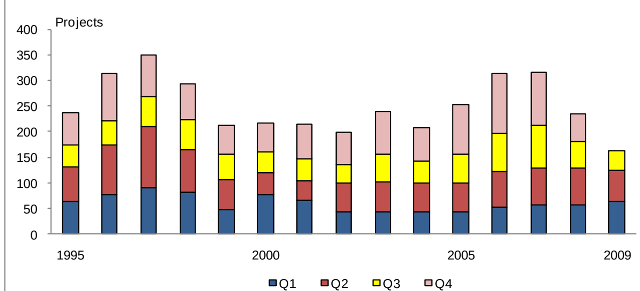
Fourth, the survey confirms that projects able to raise financing usually have the backing of large developers with extensive banking relationships and have been accorded priority status in their country (with the aim of easing current infrastructure bottlenecks or preventing future ones). The sponsors of projects reaching closure in the third quarter of 2009 include such companies as Adani Group (India), Aboitiz Power Corporation (Philippines), Aditya Birla Group (India), CEZ Group (Czech Republic), CPL (Hong Kong, China), EBX Group (Brazil), Larsen & Toubro (India), Limak Holding (Turkey), Reliance (India), Telenor (Norway), and Zain (Kuwait).

Figure 3 Investment commitments to PPI projects reaching closure in developing countries, by project size, 1995–2009



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

Figure 4 PPI projects reaching closure in developing countries, by quarter, 1995–2009



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

2. Projects reaching financial or contractual closure face more difficult financial market conditions. While infrastructure projects with private participation or PPP schemes continue to raise financing, they are competing with other projects and sectors for the reduced liquidity in the market. Some banks have partially or totally withdrawn from the project finance market. Deals take longer to close, and conditions are more stringent.[5] The syndicated loan market remains stalled, and deals are closing as club transactions, which slows the speed of closure.[6] Financing usually involves lower debt/equity ratios, higher spreads and fees, shorter debt tenors, and embedded mechanisms to encourage refinancing. Surveyed projects reaching financial closure in the third quarter of 2009 report debt/equity ratios in the low to mid 70s/30s, well below the 80s/20s or higher that were available in the precrisis period. In addition, there is a "high degree of selectivity on the part of banks and general lack of consistency in terms and conditions required by funders."[7] The increased cost of financing was highlighted as a major impact of the crisis in less than 1% of reviewed projects by investment. But this finding seems to reflect the limited publicly available information on the cost of funding rather than the actual impact of the crisis.

The favorable credit conditions prevailing before the financial crisis are not expected to return.[8] Instead, tougher financial conditions—including higher borrowing costs—are expected to continue even after financial markets have stabilized or reached a new normal. "Increased risk aversion, the

[5] European PPP Expertise Center, *The Financial Crisis and the PPP Market: Potential Remedial Actions*, Luxemburg, August 2009.

[6] A club deal is a small loan—usually US$25–100 million but as much as US$150 million—that is premarketed to a group of relationship lenders. The arranger is generally a first among equals, and each lender gets a full cut, or nearly a full cut, of the fees (http://www.wikipedia.org).

[7] European PPP Expertise Center, *The Financial Crisis and the PPP Market*, p. 5.

[8] Gershon Cohen, "The future of PPPs" in Yearbook 2009, *Project Finance International,* New York, ThomsonReuters Professional Publishing, 2009.

necessity for banks to recapitalize, increased borrowing requirements from high-income governments, and the fall into disrepute of many of the risk management strategies that contributed to boosting liquidity" in the precrisis period suggest an increased cost of borrowing in the medium term.[9] The new market conditions are forcing governments and investors to reassess projects and in many cases to restructure them to improve financial viability. Among reviewed projects, about 4% by investment reported project restructuring as a major impact of the crisis.

3. Local state-owned banks as well as multilateral and bilateral agencies continue to be key financiers, and infrastructure sponsors are looking for new sources of funding such as local financing. Local public banks have become one of the main sources of funding for private infrastructure projects. Of the 38 projects reaching closure in the third quarter of 2009, 7 projects, accounting for 25% of the investment committed in that quarter, had funding from local public banks. In the first three quarters of the year local public banks participated in the funding of 16% of the 163 projects reaching closure. These projects involve investment of US$32.7 billion, or almost half the total committed in the period. Public banks acted as lead arrangers in many cases.

Multilateral, bilateral, and export credit agencies are also taking a more active role, mobilizing funding for many projects. In the third quarter of 2009 these agencies provided funding to five projects, which represent investment of US$3.4 billion, or 24% of the total for the quarter. In the first three quarters of the year these agencies contributed direct financing to 18% of the projects reaching closure—projects representing investment of US$13.3 billion, or 20% of the total. These agencies are also working on a growing number of new projects. Of the 132 projects looking for financing at the end of the third quarter, 21 projects, representing total investment of US$17 billion, were being evaluated for funding by these agencies.

Given the lack of liquidity from commercial banks that would normally take part in loan syndications, this growing participation by local public banks and bilateral and multilateral financing institutions is not surprising. Nevertheless, these institutions are unlikely to have the capacity to fully replace commercial sources of financing.

Infrastructure sponsors in countries with developed local capital markets have started accessing those markets. In India, Adani Power raised funding through an initial public offering (IPO) in August 2009, and many power sponsors active in the country planned to do so through equity sales in late 2009 or early 2010.[10] In Mexico, one of the economies most affected by the financial crisis, road concessionaires were able to raise funding in the local capital market in late 2009. IDEAL raised funding through a bond placement, and ICA and Red de Carreteras de Occidente did so through equity sales.[11] In Brazil road concessionaires are evaluating sources of funding for participating in the road tenders of 2010. Options include debt issuance, bank loans, capital increases, and IPOs.[12]

4. Projects continue to be delayed or, to a lesser extent, canceled. Projects continued to be postponed or canceled in the third quarter of 2009 as a result of the crisis, but at a lower rate than in the previous quarter (tables 1 and 2). By the end of the third quarter such projects amounted to about 15% of reviewed projects by investment—projects that had been delayed (9%) or canceled (1%) or were at risk of being delayed (5%) if financing was not arranged in the coming months. This share of investment affected by the crisis was three percentage points lower than that reported for the end of the second quarter and totaled US$53.8 billion.

Projects in another group had been affected by the crisis but were delayed or canceled for reasons unrelated to it (such as delays in land acquisition or government approvals). By the end of the third

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[9] World Bank, *Global Economic Prospects 2010: Crisis, Finance, and Growth*, Washington, DC: World Bank, 2010, p 12.

[10] "The Power Within," *Business Standard*, August 24, 2009.

[11] "Capital Markets Beat Banobras to Mexico's Recovery," *Project Finance*, December 16, 2009.

[12] "Concessionárias buscam capital para licitações," *O Estado de São Paulo*, January 1, 2010.

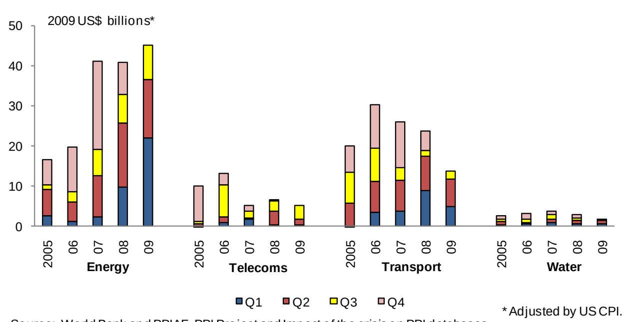
quarter these represented 14% of reviewed projects by investment (9% delayed, 3% canceled, and 2% at risk of delay). Finally, 9% of reviewed projects by investment had been delayed or at risk of being delayed but not because of the crisis. The shares of investment affected by implementation issues unrelated to the crisis were one to two percentage points higher than those at the end of the second quarter.

Competition to attract financing will increase as a growing backlog of projects attempt to secure financing. Many of the 132 projects that had been unable to secure financing by September 2009 (involving investment of US$90.3 billion) are likely to continue to seek financing. In addition, 192 recently awarded projects (involving investment of US$55 billion) will be trying to raise financing in the next 6–12 months.

5. The rate of project closure varies across sectors, with investment in the third quarter higher in energy, telecoms, transport and lower in water. In the energy sector 22 projects reached closure in the third quarter of 2009, with investment worth US$8.6 billion—up 21% compared with investment in the same period of 2008. In the first three quarters 91 energy projects reached closure, with investment worth US$45.2 billion, 37% more than in the same period of 2008 and a level not seen for new energy projects since the mid-1990s (figure 5). Energy investment has shown the most resilience during the financial crisis. Except in the fourth quarter of 2008, when the most acute phase of the crisis took place, investment in the sector has been growing since the third quarter of 2006. All project sizes accounted for the investment growth in the first three quarters of 2009 compared with the same period of 2008 (figure 6). Investment in projects of US$1 billion or more increased by 24%, to US$29.3 billion. Investment in projects of US$500 million–1 billion rose by 83%, to US$6.3 billion. And investment in projects of less than US$500 million grew by 70%, to US$9.6 billion. The number of energy projects reaching financial or contractual closure rose by 23% in the first three quarters of 2009 compared with the same period of 2008.

Energy accounts for a large but declining share of projects delayed or at risk of being delayed (table 3). Projects representing 9% of total investment in reviewed energy projects had been delayed (4%) or at risk of being delayed (5%) because of the crisis by the end of the third quarter of 2009. This share was five percentage points lower than that reported for the end of the second quarter. In addition, 15% of energy projects by investment had been affected by the crisis but were delayed (9%), at risk of being delayed (2%), or canceled (4%) for reasons unrelated to it. For some countries project delays may create capacity shortages because the decline in economic activity is not expected to significantly reduce the need for new generation capacity, which had barely been able to keep up with the growing demand in the years before the crisis.

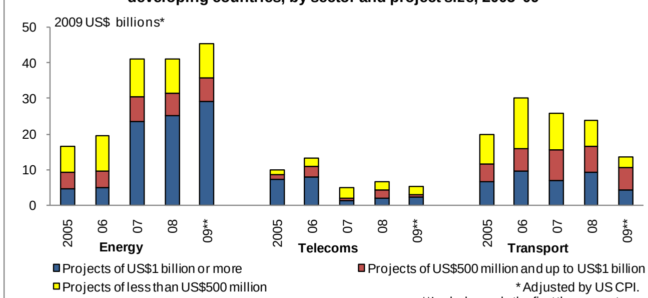
Figure 5 Investment commitments to PPI projects reaching closure in developing countries, by sector and quarter, 2005–09



* Adjusted by US CPI.

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

Figure 6 Investment commitments to PPI projects reaching closure in developing countries, by sector and project size, 2005–09



* Adjusted by US CPI.
**Includes only the first three quarters.

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

In telecommunications, where new projects account for just a fraction of annual investment, six projects reached closure in the third quarter of 2009, with investment worth U$3.6 billion—up 39% compared with the third quarter of 2008. In the first three quarters of 2009, 18 telecommunications projects reached closure, with investment worth US$5.2 billion—down 20% compared with the same period of 2008. Additional investment in existing operators, which accounts for most investment in the sector, is expected to remain flat. A recent International Telecommunication Union (ITU) report indicates that telecommunications service providers in developing countries slowed capital expenditure in 2009 and forecasts flat capital spending in 2010.[13] That trend represents a sharp slowdown from the 25% average annual growth rates reported in 2004–07.[14]

In water and sewerage three projects reached closure in the third quarter of 2009, with investment worth US$80 million, down 15% compared with the third quarter of 2008. That brought the total for the first three quarters of 2009 to 19 water projects with investment worth US$1.6 billion—down 12% compared with investment in the same period of 2008. This level of activity was the lowest since 2003. China accounted for all water projects reaching closure during the first three quarters of 2009 except for two build-operate-transfer contracts for treatment plants in Algeria and Jordan. The number of water projects reaching financial or contractual closure fell by 38% in the first three quarters of 2009 compared with the same period of 2008.

Transport remains the sector most affected by the financial crisis. In the third quarter of 2009 seven transport projects reached closure, with investment worth US$1.9 billion, up 30% compared with the third quarter of 2008. And in the first three quarters of the year 35 transport projects reached closure, representing investment worth US$13.7 billion. But this investment level was 27% lower than that in the same period of 2008—and the lowest since 2005. All project sizes accounted for the investment decline in the first three quarters of 2009 compared with the same period of 2008. Investment in projects of US$1 billion or more dropped by 44%, to US$4.4 billion. Investment in projects of US$500 million–1 billion declined by 15%, to US$6.1 billion. And investment in projects of less than US$500 million fell by 15%, to US$3.2 billion. The number of transport projects reaching financial or contractual closure declined by 24% in the first three quarters of 2009 compared with the same period of 2008.

Transport also had the largest share of projects delayed, canceled, or at risk of delay by the end of the third quarter of 2009. Of the reviewed transport projects, about 28% by investment had been delayed (18%), at risk of being delayed (6%), or canceled (4%) as a result of the crisis. This share was three percentage points higher than that reported for the end of the second quarter of 2009. In addition, 12% of transport projects by investment had been affected by the crisis but were delayed (7%), at risk of being delayed (3%), or canceled (2%) for reasons unrelated to it. The impact on transport is not surprising given the decline in global demand for transport in 2009. According to a recent report by the Organisation for Economic Co-operation and Development (OECD), world trade volume shrank by 12.5% between 2008 and 2009, though it is expected to grow by 6% in 2010.[15] Airport traffic also declined in the first half of 2009, but then started to stabilize.[16]

6. The rate of project closure varies across developing regions, with investment in the third quarter higher in South Asia, stable in Latin America and East Asia and Pacific, and lower in the other three. South Asia (SA) had 10 projects close in the third quarter of 2009, with investment worth US$8.3 billion—almost twice the investment reported in the third quarter of 2008 (figure 7). That brought the total for the region in the first three quarters of 2009 to 41 projects with investment worth US$26.2 billion. This activity represented a peak for new projects in the region and a 72% growth in investment compared with the same period of 2008. Among the developing regions, South Asia has had the most resilient investment during the financial crisis. The region has had steady growth in investment since the third quarter of 2007, except in the third and fourth quarters of 2008, when the most acute phase of the crisis occurred. But the growth has been concentrated in India, which has accounted for most of the activity in the region. If India were excluded, South Asia would have had no investment in new projects in the third quarter of 2009 and only US$1.1 billion in the first three quarters, 23% less than in the same period of 2008. All project sizes helped drive the

[13] ITU, *Confronting the Crisis: ICT Stimulus Plans for Economic Growth*, 2nd ed., Geneva, October 2009.

[14] "Private Activity in Infrastructure Down, but Still around Peak Levels," PPI data update note 28, November 2009.

[15] OECD, *OECD Economic Outlook No. 86*, Paris, November 2009.

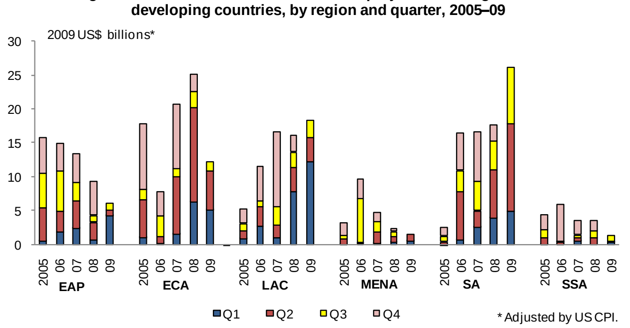
[16] Airport Council International, various press releases, 2009.

investment growth in South Asia in the first three quarters of 2009 compared with the same period of 2008 (figure 8). Investment in projects of US$1 billion or more increased by 60%, to US$16.1 billion. Investment in projects of US$500 million–1 billion rose by 200%, to US$5.5 billion. And that in projects of less than US$500 million grew by 23%, to US$4.6 billion. The number of projects reaching closure in South Asia grew by 28% in the first three quarters of 2009 compared with the same period of 2008.

Latin America and the Caribbean (LAC) had seven projects close in the third quarter of 2009, with investment worth US$2.5 billion, similar to the investment level in the same quarter of 2008. That brought activity in the first three quarters of 2009 to 23 projects with investment worth US$18.3 billion, up 34% compared with investment in the same period of 2008. But the investment growth was concentrated in two Brazilian projects that closed in the first quarter of 2009: the US$4.17 billion, 3.3-gigawatt Jirau hydropower plant and the US$5.7 billion, 3.3-gigawatt San Antonio hydropower plant, which together accounted for more than half the total regional investment in the first three quarters of the year. If these two projects were excluded, investment in the region in the first three quarters of 2009 would have declined by 38% compared with the same period of 2008. The number of projects reaching financial or contractual closure in the region declined by 36% in the first three quarters of 2009 compared with the same period of 2008.

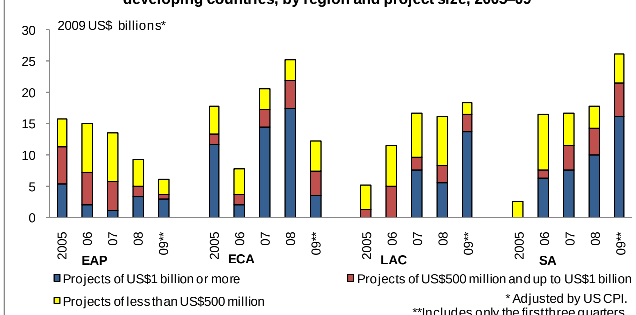
East Asia and Pacific (EAP) had 10 projects reach closure in the third quarter of 2009, with investment worth US$1 billion, similar to the investment level in the same quarter of 2008. That brought activity in the region for the first three quarters of 2009 to 39 projects with investment worth US$6.1 billion, up 40% compared with investment in the same period of 2008. But just one project (the concession of the Philippines' transmission company) accounted for 47% of the regional investment in the first three quarters of 2009. If projects of US$1 billion or more were excluded, investment in East Asia in the first three quarters of 2009 would have fallen by 26% compared with the same period of 2008. The number of projects reaching closure fell by 34% in the first three quarters of 2009 compared with the same period of 2008.

Figure 7 Investment commitments to PPI projects reaching closure in developing countries, by region and quarter, 2005–09



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

Figure 8 Investment commitments to PPI projects reaching closure in developing countries, by region and project size, 2005–09



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

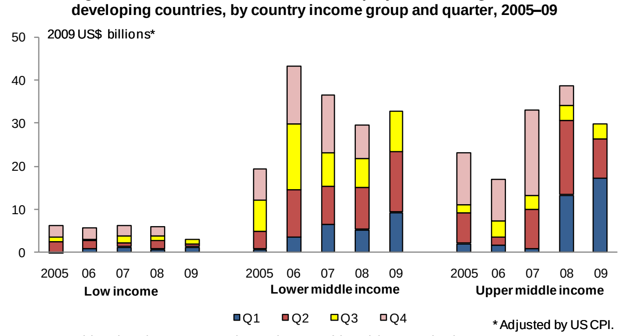
Among the developing regions, Europe and Central Asia (ECA) continues to be the most affected by declining investment. The region had eight projects reach closure in the third quarter of 2009, with investment worth US$1.5 billion, down 37% compared with the same quarter of 2008. In the first three quarters of the year the region had 42 projects with investment worth US$12.3 billion, reflecting a 45% drop in investment compared with the same period of 2008. Projects of US$1 billion or more accounted for the decline in investment. If those projects were excluded, investment in the region in the first three quarters of 2009 would have grown by 36% compared with the same period of 2008. Investment in small renewable power plants increased. The number of infrastructure projects reaching closure in Europe and Central Asia rose by 14% in the first three quarters of 2009 compared with the same period of 2008.

The Middle East and North Africa (MENA) had no infrastructure projects with private participation reaching closure in the third quarter of 2009. In the first half of the year the region had five projects with investment worth US$1.6 billion. Total investment in the first three quarters was 21% lower than in the same period of 2008. Sub-Saharan Africa (SSA) had three projects close in the third quarter of 2009, with investment worth US$780 million, 25% less than in the same quarter of 2008. That brought total activity in the region in the first three quarters of 2009 to 13 projects with investment worth US$1.4 billion, down 34% compared with investment in the same period of 2008.

For most developing regions the share of reviewed projects by investment that had been delayed, at risk of being delayed, or canceled because of the crisis by the end of the third quarter of 2009 ranged between 16% and 18% (table 4). The exceptions were East Asia (7%) and Sub-Saharan Africa (0). For Latin America and South Asia those shares of affected investment reflected improvements of a few percentage points from the end of the second quarter, while for Europe and Central Asia the share had deteriorated by a few points. The shares of projects delayed, at risk of being delayed, or canceled because of the crisis as well as other implementation issues (delays in land acquisition and government approvals) were highest for Europe and Central Asia (20% of investment), South Asia (17%), and East Asia (17%). In East Asia most of the affected investment corresponded to five independent power producer projects in Thailand, which were delayed because of lower projected demand for electricity. Europe and Central Asia and Latin America accounted for most project restructurings due to the crisis.

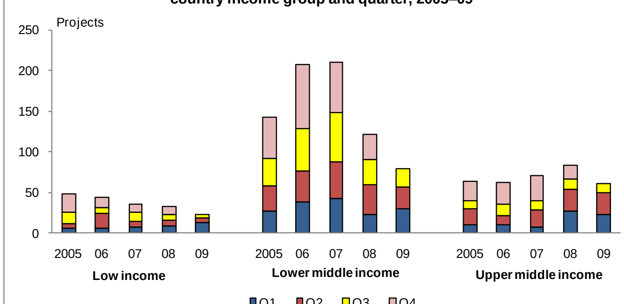
7. The rate of project closure varies across country income groups, with investment in the third quarter higher in lower-middle-income countries, stable in upper-middle-income countries, and lower in low-income countries.[17] In the third quarter of 2009 lower-middle-income countries had 22 projects reach closure, with investment worth US$9.6 billion, up 40% compared with the same period of 2008. In the first three quarters of 2009 this group of countries had 79 projects with investment worth US$32.9 billion (figure 9). This level of investment is 50% higher than that reported in the same period of 2008 and a peak for this group. India accounted for most of the investment growth in lower-middle-income countries. If that country were excluded, the investment growth would have been limited to 30%. Projects of US$500 million or more drove the growth. By contrast with investment, the number of projects reaching closure declined by 13% in the first three quarters of 2009 compared with the same period of 2008 (figure 10).

Figure 9 Investment commitments to PPI projects reaching closure in developing countries, by country income group and quarter, 2005–09



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

Figure 10 PPI projects reaching closure in developing countries, by country income group and quarter, 2005–09



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

Upper-middle-income countries had 12 projects reaching closure in the third quarter of 2009, with investment worth US$3.5 billion, similar to the investment level in the third quarter of 2008. In the first three quarters of 2009 activity in this country group amounted to 61 projects with investment worth US$29.9 billion, down 12% compared with investment in the same period of 2008. Brazil accounted for a large share of the investment. If Brazil were excluded, investment in upper-middle-income countries in the first three quarters of 2009 would have fallen by 48% compared with the same period of 2008. The total number of projects reaching closure in this country group declined by 9% in the first three quarters of 2009 compared with that period of 2008.

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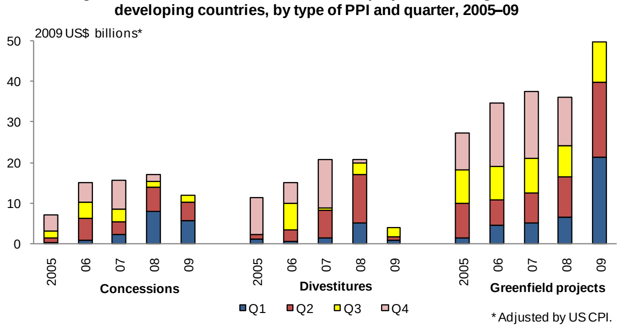
[17] Surveyed countries are classified by income group as low income (2007 GNI per capita of US$935 or less), lower middle income (US$936–3,705), or upper middle income (US$3,706–11,455).

Low-income countries had 4 projects with investment worth US$1 billion reaching closure in the third quarter of 2009. That investment is 19% lower than in the same quarter of 2008. In the first three quarters of 2009 this country group had 23 projects with investment worth US$2.9 billion, down 24% compared with investment in the same period of 2008. The number of projects remained stable.

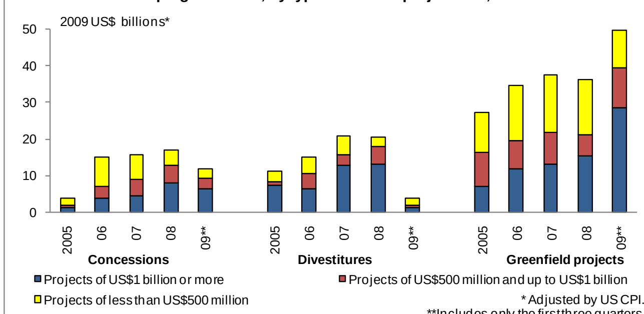
8. Greenfield projects continue to show growth in investment (and debt raised), while concessions and divestitures show a decline. Greenfield projects (build-operate-transfer and build-operate-own projects and merchant facilities) have shown the most resilience in investment levels during the crisis. The 26 greenfield projects reaching closure in the third quarter of 2009 had investment worth US$10 billion—36% more than the level reported in the same period of 2008. In the first three quarters of 2009, 110 greenfield projects reached closure, with investment worth US$49.8 billion—twice the investment reported in the same period of 2008 (figure 11). Large greenfield projects accounted for the investment growth in the first three quarters of 2009 compared with the same period of 2008 (figure 12). Investment in projects of US$1 billion or more grew by 170%, to US$28.6 billion. Investment in projects of US$500 million–1 billion increased by 280%, to US$10.8 billion. By contrast, investment in projects of less than US$500 million remained stable, at US$10.5 billion. The number of greenfield projects reaching financial closure was 5% higher in the first three quarters of 2009 than in the same period of 2008.

Figure 11 Investment commitments to PPI projects reaching closure in developing countries, by type of PPI and quarter, 2005–09



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

Figure 12 Investment commitments to PPI projects reaching closure in developing countries, by type of PPI and project size, 2005–09



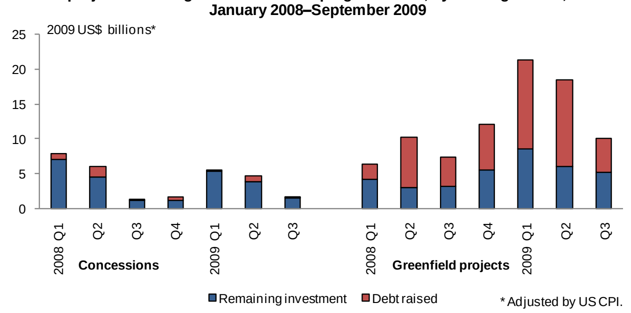
Source: World Bank and PPIAF, PPI Project and Impact of the crisis on PPI databases.

Six concessions reached closure in the third quarter of 2009, attracting investment worth US$1.7 billion, up 25% compared with investment in the third quarter of 2008. In the first three quarters of 2009, 28 concessions closed, with investment worth US$12 billion. The number of concessions reaching closure was down 35%, and investment 22%, compared with the same period of 2008. Divestiture activity continued to slow. Investment declined by 80% and the number of projects by 35% in the first three quarters of 2009 compared with the same period of 2008.

Greenfield projects continue to be best able to raise debt (figure 13). Within the greenfield category, energy projects, particularly power plants, have raised the most debt since 2008 (figure 14). Concessions, by contrast, have not been able to raise much financing. Many reached contractual closure (with the concession contract being signed and the private operator taking over the assets) with the agreement that funding would be raised later. But many of the concessions reaching contractual closure in 2008 and 2009 experienced delays in securing required financing. This was the case for the five road concessions that Spanish OHL won in Brazil in late 2007, which involve investment of US$4.8 billion over 25 years. These concessions reached contractual closure in February 2008 and operational control was transferred to OHL, but the sponsor was able to raise only short-term financing in 2008 and was still negotiating long-term financing from BNDES, the Brazilian development bank, by September 2009. OHL expects to finance the US$4.8 billion investment through debt (50%), equity (25%), and concession revenues (25%).[18] Other Brazilian road concessions that reached contractual closure in 2008 or 2009 (Ayrton Senna–Carvalho Pinto highway, BR-153 Toll Road, Raposo Tavares Toll Road, Rodoanel Mario Covas Toll Road) also obtained bridge rather than long-term financing.

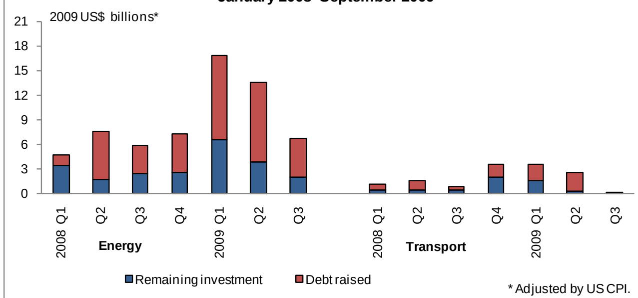
[18] "OHL quiere mejorar la nota," *El Pais*, November 8, 2009.

Figure 13 Investment commitments to concessions and greenfield projects reaching closure in developing countries, by funding source, January 2008–September 2009



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

Figure 14 Investment commitments to greenfield projects reaching closure in developing countries, by sector and funding source, January 2008–September 2009



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

Concessions have been the type of PPI most affected by project delays and cancellations as a result of the crisis. By the end of the third quarter of 2009 around 18% of the reviewed concessions by investment had been delayed (17%) or at risk of being delayed (1%), and 6% had been restructured (in phases), because of the crisis. The share of investment in concessions affected by the crisis by the end of the third quarter of 2009 was similar to that reported for the end of the second quarter. Greenfield projects have also been affected by delays and the risk of delays. By the end of the third quarter around 16% of reviewed greenfield projects by investment had been delayed (8%), at risk of being delayed (6%), or canceled (2%) as a result of the crisis. But the share of investment in greenfield projects affected by the crisis declined by three percentage points from the 19% at the end of the second quarter. The percentage of greenfield projects affected by the crisis is not surprising given the predominance of greenfield projects in the overall project sample (73% of the 843 reviewed projects are greenfield projects).

9. Developing countries continue to tender and award new PPI projects. The review of projects shows that 14 countries awarded 44 projects totaling US$13.2 billion in the third quarter of 2009 and have yet to start looking for finance. In addition, 26 countries awarded 86 projects with investment worth US$26.3 billion in the first two quarters of 2009. These 130 projects were mostly in energy (55 projects worth US$6.7 billion) and transport (33 projects worth US$23.3 billion), but also in telecommunications (11 projects worth US$1.5 billion) and water and sewerage (31 projects worth US$1.7 billion). And while they were in all developing regions, most were in Europe and Central Asia (13 projects for US$11.1 billion), East Asia (61 projects worth US$7.9 billion), South Asia (21 projects worth US$7.6 billion), and Latin America (22 projects worth US$4.2 billion). In addition, at least 69 projects, involving investment of US$40.5 billion, are in the final tender stage at the end of the third quarter of 2009 (to be awarded in the fourth quarter).

Many developing country governments are trying to facilitate implementation of new projects by restructuring them so that they are financially viable under today's market conditions. For example, Mexico reduced project size, changed bidding documents, and ensured credit support from public institutions (Banobras and Fonadin) for the 11 road concessions that were in the bidding process in 2009. India, Colombia, and Eastern European countries have also restructured projects to improve their attractiveness to the private sector in the new market environment.[19]

Conclusion. PPI investments have recovered in only few economies. While these success stories have boosted the totals, the vast majority of developing countries remain severely affected by the crisis. If large projects (US$1 billion or more) were excluded, almost all developing regions would have seen investment decline in the first three quarters of 2009 compared with the same period of 2008. South Asia was the only exception, thanks to the high level of activity in India. Among sectors, energy is the only one where investment grew for all project sizes, thanks to the activity in new power plants. There is also evidence of new projects being postponed and canceled because of the financial crisis.

[19] Assessment of the impact of the crisis on new PPI projects – Update 4, October 2009.

But the impact of the financial crisis on project implementation is declining, and other implementation issues are becoming more prominent in project delays. The selectivity in investment growth and the project postponements and cancellations indicate that the "flight to quality" continues. This survey confirms the finding of the previous updates that the projects most likely to reach closure are those with strong economic and financial fundamentals and the backing of financially solid sponsors. Projects able to raise funding can do so only at higher cost and with more stringent conditions (lower debt/equity ratios, shorter tenors, and more conservative structures).

Developing country governments remain committed to their PPP programs and are trying to support implementation of new projects by restructuring them and facilitating financing. In addition, multilateral and bilateral agencies continue to provide critical funding to private infrastructure projects.

In the coming quarters this analysis will be refined to assess the extent to which all these trends continue.

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

Type of impact	Awarded	Closed financing[a]	Looking for finance	Tender in progress	Tender delayed	Tender canceled	Canceled	Total
No major impact reported	151	374	65	50	3	1	1	645
Raised financing but at a higher cost	0	2	1	0	0	0	0	3
Project restructuring								
Because of the crisis	1	2	2	2	1	0	0	8
Because of more than the crisis	0	0	2	0	0	0	1	3
Delayed								
Because of the crisis	2	12	15	1	11	0	0	41
Because of more than the crisis	10	1	15	3	8	0	0	37
For reasons other than the crisis	7	2	9	5	6	0	0	29
At risk of delay								
Because of the crisis	10	2	14	2	0	0	0	28
Because of more than the crisis	5	0	6	1	0	0	0	12
For reasons other than the crisis	1	2	1	1	0	0	0	5
At risk of cancellation								
Because of the crisis	1	0	0	0	0	0	0	1
Because of more than the crisis	1	0	1	0	0	0	0	2
For reasons other than the crisis	0	0	0	3	0	0	0	3
Canceled								
Because of the crisis	1	1	1	0	0	5	3	11
Because of more than the crisis	2	0	0	1	0	7	1	11
For reasons other than the crisis	0	1	0	0	0	1	2	4
Total	**192**	**399**	**132**	**69**	**29**	**14**	**8**	**843**

a. See footnote 4 for definition of financial or contractual closure by type of project.
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 at advanced stage of tender in developing countries, by project status and impact of the crisis, January 2008–September 2009
(US$ millions)

Type of impact	Awarded	Closed financing[a]	Looking for finance	Tender in progress	Tender delayed	Tender canceled	Canceled	Total
No major impact reported	25,161	125,308	26,642	23,437	750	140	87	201,524
Raised financing but at a higher cost	0	1,530	230	0	0	0	0	1,760
Project restructuring								
Because of the crisis	2,190	759	7,540	554	2,500	0	0	13,544
Because of more than the crisis	0	0	4,100	0	0	0	55	4,155
Delayed								
Because of the crisis	1,472	6,779	8,184	448	14,044	0	0	30,927
Because of more than the crisis	5,677	2,449	18,990	201	3,895	0	0	31,212
For reasons other than the crisis	6,810	615	4,085	11,648	4,679	0	0	27,838
At risk of delay								
Because of the crisis	4,739	831	11,820	500	0	0	0	17,890
Because of more than the crisis	742	0	5,883	1,150	0	0	0	7,775
For reasons other than the crisis	121	1,350	102	1,122	0	0	0	2,695
At risk of cancellation								
Because of the crisis	326	0	0	0	0	0	0	326
Because of more than the crisis	470	0	800	0	0	0	0	1,270
For reasons other than the crisis	0	0	0	1,100	0	0	0	1,100
Canceled								
Because of the crisis	900	10	1,900	0	0	1,588	643	5,041
Because of more than the crisis	6,910	0	0	305	0	1,937	450	9,602
For reasons other than the crisis	0	3	0	0	0	0	2,094	2,096
Total	**55,518**	**139,634**	**90,277**	**40,466**	**25,868**	**3,665**	**3,328**	**358,756**

a. See footnote 4 for definition of financial or contractual closure by type of project.
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 at advanced stage of tender in developing countries, by sector and impact of the crisis, January 2008–September 2009
(US$ millions)

Type of impact	Energy	Telecommunications	Transport	Water and sewerage	Total
No major impact reported	130,232	11,128	53,166	6,998	201,524
Raised financing but at a higher cost	1,760	0	0	0	1,760
Project restructuring					
Because of the crisis	6,338	0	7,206	0	13,544
Because of more than the crisis	100	0	4,055	0	4,155
Delayed					
Because of the crisis	7,420	0	23,494	12	30,927
Because of more than the crisis	18,919	2,494	9,800	0	31,212
For reasons other than the crisis	10,407	3,587	12,508	1,336	27,838
At risk of delay					
Because of the crisis	9,533	0	8,288	69	17,890
Because of more than the crisis	3,612	0	4,163	0	7,775
For reasons other than the crisis	2,374	0	321	0	2,695
At risk of cancellation					
Because of the crisis	0	0	326	0	326
Because of more than the crisis	1,270	0	0	0	1,270
For reasons other than the crisis	1,100	0	0	0	1,100
Canceled					
Because of the crisis	10	73	4,948	10	5,041
Because of more than the crisis	7,665	0	1,937	0	9,602
For reasons other than the crisis	0	400	1,694	3	2,096
Total	**200,741**	**17,682**	**131,906**	**8,428**	**358,756**

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 at advanced stage of tender in developing countries, by region and impact of the crisis, January 2008–September 2009
(US$ millions)

Type of impact	EAP	ECA	LAC	MENA	SA	SSA	Total
No major impact reported	29,398	46,084	64,037	6,704	46,919	8,383	201,524
Raised financing but at a higher cost	0	0	0	0	1,375	385	1,760
Project restructuring							
Because of the crisis	21	10,468	3,054	0	0	0	13,544
Because of more than the crisis	0	4,000	100	0	55	0	4,155
Delayed							
Because of the crisis	0	10,513	8,117	312	11,986	0	30,927
Because of more than the crisis	7,842	12,555	200	0	10,616	0	31,212
For reasons other than the crisis	3,204	11,613	2,196	60	9,965	800	27,838
At risk of delay							
Because of the crisis	3,063	6,216	3,457	560	4,594	0	17,890
Because of more than the crisis	0	1,423	1,150	0	5,202	0	7,775
For reasons other than the crisis	1,350	0	0	0	1,345	0	2,695
At risk of cancellation							
Because of the crisis	0	326	0	0	0	0	326
Because of more than the crisis	800	0	0	0	470	0	1,270
For reasons other than the crisis	0	1,100	0	0	0	0	1,100
Canceled							
Because of the crisis	225	2,273	1,900	633	10	0	5,041
Because of more than the crisis	0	8,484	363	0	305	450	9,602
For reasons other than the crisis	3	0	0	400	1,694	0	2,096
Total	**45,906**	**115,055**	**84,573**	**8,669**	**94,536**	**10,018**	**358,756**

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