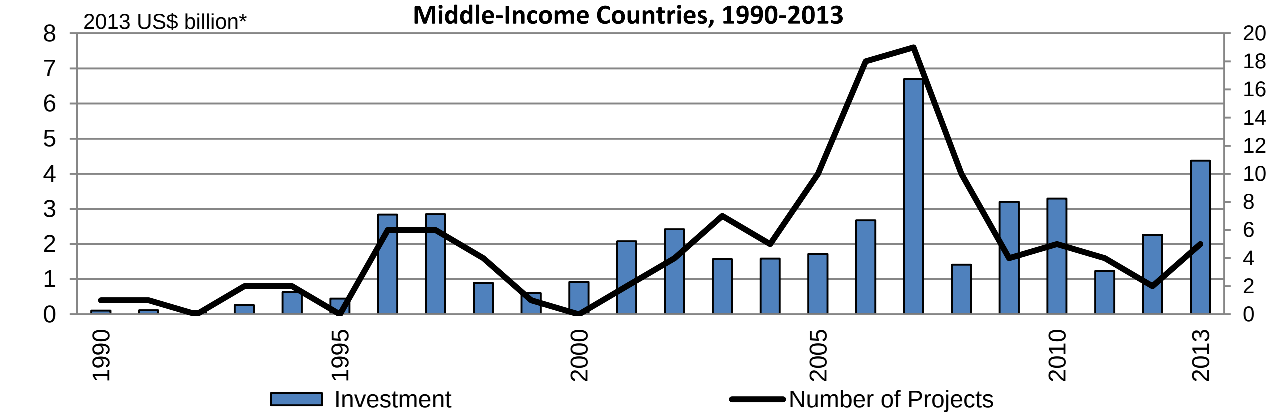
Snapshot: Singaporean-sponsored Private Participation in Infrastructure (PPI)[1]

March 2015 **PPI Update Note**

Introduction

Singaporean-based companies sponsored 118 new infrastructure projects with investment commitments of US$44.3 billion from 1990 to 2013. These projects were implemented in 23 low-and middle-income countries in the energy, telecom, transport and water and sewerage sectors.[2] Private investment peaked in 2007 when Singaporean companies sponsored 19 new infrastructure projects totaling US$6.4 billion (Figure 1).[3]

Figure 1: Private Investment in Infrastructure in Low-and Middle-Income Countries, 1990-2013



Source: World Bank and PPIAF, PPI Project Database.

* Adjusted by US CPI

Top Sponsors	Projects	Largest Project (US$)
PSA Corp	17	Tianjin Port North Gangchi Container Terminal Phase 3 (China, 2007), US$825.5 million
Asia Environment	11	Danyang City Water Six Treatment Plants (China, 2008), US$57.2 million
Asia Power	9	Tianquan River (Shiyang Section) Hydroelectric Power Development (China, 2006), US$87.8 million
Sinomem Technology	9	Jilin Liaoyuan Wastewater Treatment Plant (China, 2008), US$12.9 million
Asia Water Technology	8	Huangpi Sewerage Collection Network Project (China, 2007), US$43.4 million
Hyflux	8	Magtaa Desalination Plant (Algeria, 2009), US$468 million

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This note is a product of the Public Private Partnership Group of the World Bank, and the Private Participation in Infrastructure Database(PPI Database), written by Yanhuan Wang and edited by Henry Kasper and Alexander N. Jett.

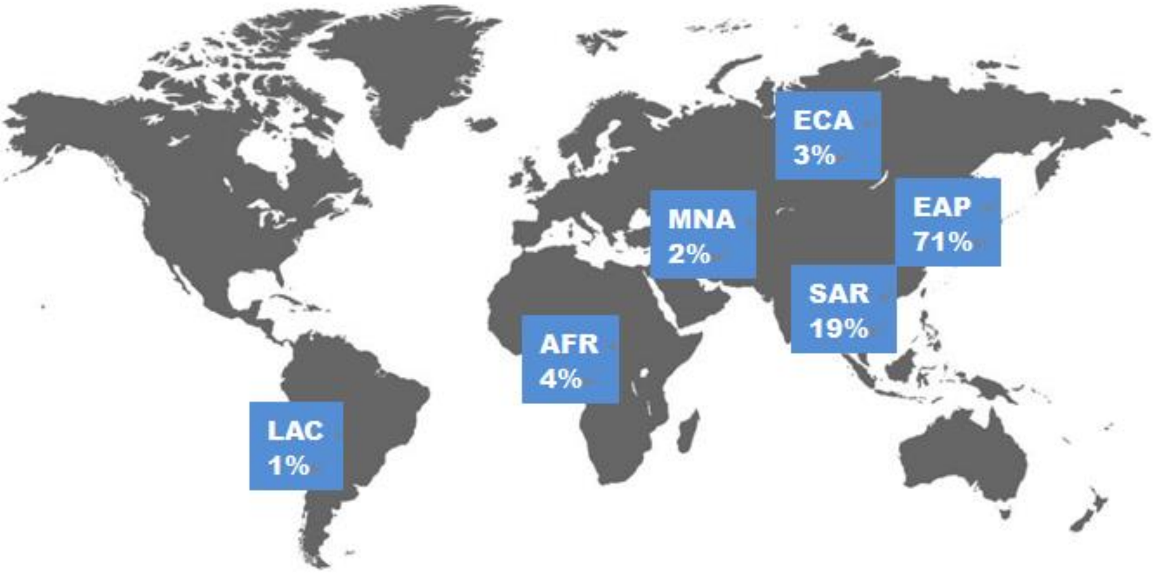
[1] Private Participation in Infrastructure (PPI) is defined by the World Bank's Private Participation in Infrastructure Database. Its methodology is available at http://ppi.worldbank.org/resources/ppi_methodology.aspx.

[2] The analysis includes projects in which Singaporean sponsors held an equity stake as of 2013. Projects where Singaporean sponsors sold their equity participation before 2013 and projects under development are not included.

[3] Total investment amounts have been adjusted using 2013 US CPI values.

Regional Overview

Singaporean companies sponsored most deals close to home; **East Asia and Pacific (EAP)** ranked as the top destination with US$31.2 billion (71% of total investment) in 86 projects. Within EAP, the Philippines was the largest destination among Singaporean sponsors with one telecom and two energy projects comprising US$10 billion, or 32% of regional investment. Thailand ranked second among Singaporean sponsors, receiving US$8.7 billion. Ranking third was Indonesia with over US$6 billion in investment commitments. Of the total investment in EAP, roughly 80% was made in telecom (US$28.6 billion). Notably, 47 of 49 water projects sponsored by Singaporean companies were in China—many of which were projects granted by local governments. But even as China received 70 of the 118 global deals, projects were smaller in size than the average for other countries.



South Asia (SAR) was the second largest destination targeted by Singaporean sponsors, with commitments of US$8.6 billion in 19 projects. Private activity in the region was concentrated in two countries: India and Pakistan. Sponsors committed US$4.6 billion in 13 new projects in India, while Pakistan was the recipient of US$3.5 billion in three new projects.

In **Sub-Saharan Africa (AFR)**, Singaporean companies sponsored US$1.6 billion, or 4% of total investment commitments. The two projects include the Lekki Deep Seaport in Nigeria (US$1.5 billion) and a 25-year seaport terminal concession in Gabon (US$86 million).

Eastern Europe and Central Asia (ECA) attracted just over 3% of global investment commitments. Singaporean companies were involved in projects in Turkey (US$950 million for the Port of Mersin Concession), Kosovo (US$429 million for IPKO, a greenfield telecom project), and in the Russian Federation, where sponsors secured a management contract for the Sheremetyevo International Airport near Moscow.

Singaporean sponsors had limited involvement in infrastructure projects in the **Middle East and North Africa (MNA)** and **Latin America and the Caribbean (LAC)**.[4] Combined, both regions had investment commitments of less than US$1 billion, or 3% of the global total. Most sponsor activity in MNA was in Algeria (2) and Yemen (1); within LAC, the greatest activity was in Ecuador (2), Brazil (1), Nicaragua (1), and Panama (1).

Most investment commitments by Singaporean sponsors was in upper-middle income countries (81 projects—69% of the total), followed by lower-middle income countries (33 projects—28% of the total) and low-income countries (4 projects—3% of the total).[5]

Sector Overview

Of the total number of projects, sponsor activity was largely concentrated in **water & sewerage** with 49 projects, most of which were greenfield water treatment facilities. An overwhelming majority of water projects (47) were in China, with Indonesia and Algeria each having one as well. The largest greenfield water deal was to build and operate the Magtaa Desalination Plant in Algeria. This project reached financial closure in March 2009. Awarded via competitive bidding, the US$468 million project is 47% owned by Singapore-based Hyflux.

In the **energy sector**, Singaporean companies sponsored 33 projects, of which 28 were greenfield, two were brownfield concessions and three were divestitures. Twelve projects were in East Asia and Pacific, 11 were in South Asia and three were in Latin America and the Caribbean. The largest greenfield energy deal was a 1,200 megawatt hydro power plant located in North Sikkim, India. The project reached financial closure in 2007 and cost US$1.4 billion. The project's majority shareholder was Asian Genco, a Singaporean developer.

Transport was the third most attractive sector for Singaporean sponsors. With 26 of the 118 projects in transport, sponsors focused on EAP, where 13 of the 26 deals took place. However, the largest greenfield seaport terminal project—Lekki Deep Seaport—was outside of EAP in Nigeria. The US$1.5 billion investment reached financial closure in 2013. The project was sponsored by Singapore-based Tolaram Group (62%).

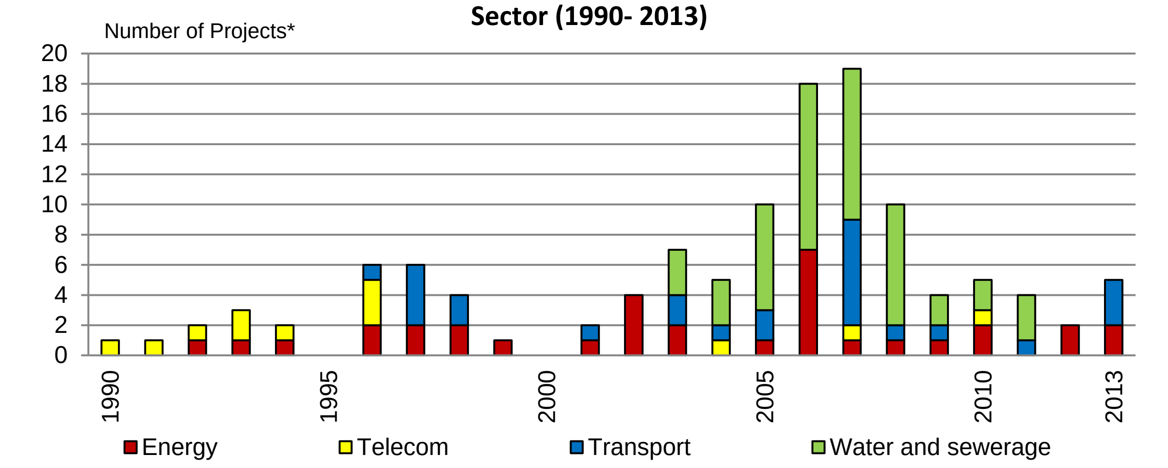
T**elecommunications** had the fewest projects sponsored, most of which were greenfield mobile deals in EAP. The largest greenfield mobile project—Globe Telecom—was a 25-year concession in the Philippines. The US$1 billion investment was a joint venture between Asiacom Philippines Inc (54%) and Singapore Telecom (22%).

As shown in Figure 2, 49 of 118 projects were in water, followed by energy (33), transport (26) and telecom (10).

[4] In 2014 Changi Airports International Pte (Sinagpore) and Odebrecht SA (Brazil) sponsored the Galeao International Airport in Rio de Janeiro, Brazil. The size of this US$10 billion mega-project will raise the ranking of Latin America region to the second largest destination of Singapore sponsored investment.

[5] This analysis uses the World Bank's country classification (July 2013), which groups developing countries in the following income categories: low-income countries (2013 GNI per capita of $1,035 or less), lower-middle income countries (2013 GNI per capita of $1,036 - $4,085) and upper-middle income countries (2013 GNI per capita of $4,086 - $12,615).

Figure 2: Number of Infrastructure Projects by Singaporean Sponsors, by Sector (1990- 2013)

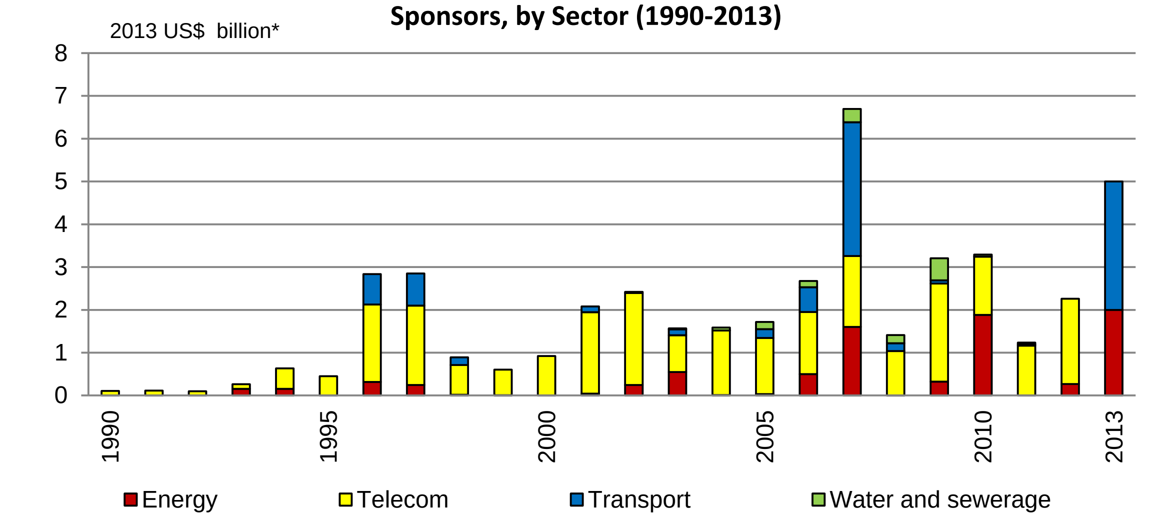


Source: World Bank and PPIAF, PPI Project Database.

* Adjusted by US CPI

Despite limited sponsor activity with only ten projects, investment commitment was greatest in telecom with US$28.6 billion, or 64% of total PPI. Transport was next with over US$7.7 billion, followed by energy with US$6.4 billion and water & sewerage with US$1.5 billion (Figure 3). Although deal activity was greatest in the water sector, the relatively small size of each deal resulted in only US$1.5 billion in total investment commitments.

Figure 3: Investment Commitments in Infrastructure by Singaporean Sponsors, by Sector (1990-2013)



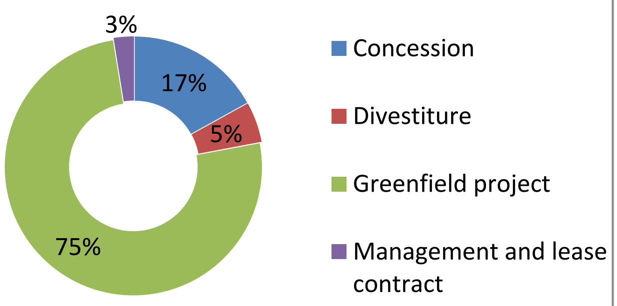
Source: World Bank and PPIAF, PPI Project Database.

* Adjusted by US CPI

Risk Sharing and Bidding

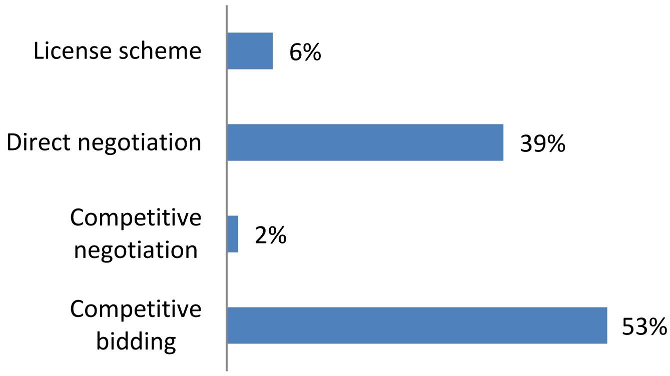
Regarding the risk allocation of PPI projects, Singaporean companies sponsored greenfield projects 75% of the time (Figure 4). These projects typically have a higher risk profile along with higher investment amounts. Greenfield projects were found across all subsectors—including electricity generation projects, water treatment projects, seaport terminal projects and mobile telecom projects.[6]

Figure 4. Percent of projects by Contract Type, (Singaporean Sponsors), 1990-2013



Source: World Bank and PPIAF, PPI Database.

Figure 5. Award Method in Singaporean-Sponsorrd Projects, 1990-2013



Source: World Bank and PPIAF, PPI Database.

Singaporean sponsors also chose projects that were awarded through competitive bidding over half of the time (Figure 5). Projects awarded through direct negotiation were also favored. However, projects awarded through competitive negotiation (one project) or license schemes (four projects) were less common.[7]

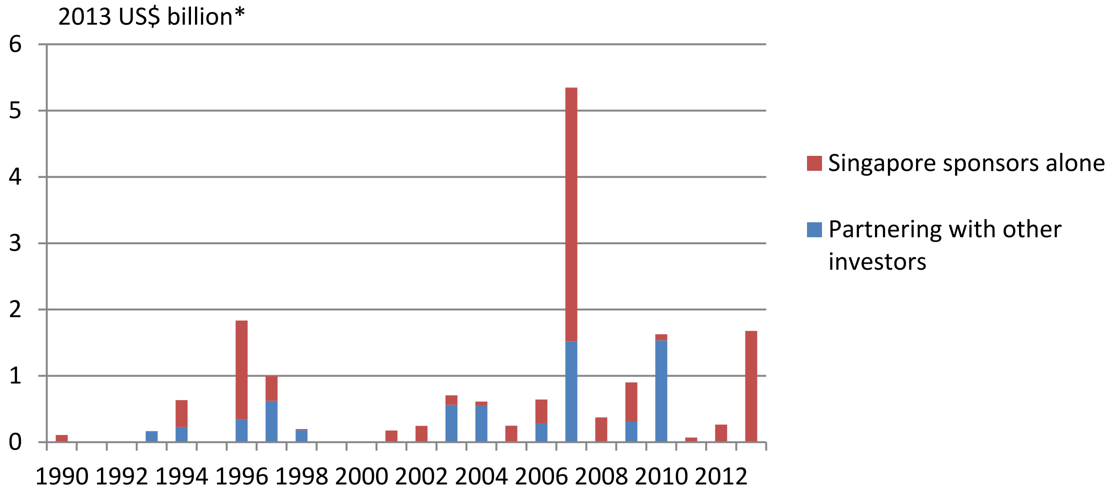
Financing of New Projects[8]

Singaporean companies sponsored projects independently about 61% of the time since 1990. For the remaining projects, they either formed joint ventures with domestic or foreign sponsors, or entered a consortium of three sponsors. The year 2007 marked the peak in the number of projects sponsored exclusively by Singaporean companies, as did total investments committed.

Multilateral Support: Five greenfield projects were sponsored in Vietnam, China, Ecuador, Kosovo and India (one in each). Each deal received funding from multilateral institutions in the form of guarantees, political risk insurance (MIGA) and loans (European Investment Bank, Asian Development Bank and IFC).

[6] In the 2013 data from the PPI Database, PPI Type data was available for 73 projects.
[7] In the 2013 data from the PPI Database, award method data was available for 62 projects.
[8] This analysis only accounts for the investments in the ***New Projects*** from 1990-2013.

Figure 6: Single vs. Multiple Sponsors in PPI Projects (1990-2013)



Source: World Bank and PPIAF, PPI Database

* Adjusted by US CPI.

Featured Project

Teesta III Large Hydro Electric Project (India) | Greenfield BOT

The Teesta III Hydro Electric Project—a 1,200 megawatt plant located in North Sikkim, India—was the largest single investment committed by a Singaporean sponsor from 1990 to 2013. Led by Rural Electrification Corporation, a consortium of banks provided financing for the US$1.4 billion project which reached financial closure in September, 2007.

The project was awarded by the Government of Sikkim through competitive bidding based on the highest upfront premium paid to the Government of Sikkim. Members of Teesta Urja Limited (TUL)—a consortium of companies led by Singapore-based Asian Genco—sponsored the deal by signing an agreement with the Government of Sikkim (GoS) in July, 2005, to implement the project on a Build-Own-Operate-Transfer (BOOT) basis for a period of 35 years. The project company was owned by the TUL consortium (74%) and the Government of Sikkim (26%). The TUL consortium was owned by Asian Genco (50.1%), PTC India Limited (11%) and Athena Projects Pvt. (13%). TUL signed a PPA with PTC India Limited, a power trading company for the saleable power generated from this project.

Unique Feature: The equity participation of the GoS did not involve an actual upfront payment by the Government. Instead, the payment of upfront equity was to be adjusted against the proceeds from the sale of free power from the project to the GoS. The project was required to provide royalties to the GoS of free power to the extent of 12% of the energy generated from the plant for the first 12 years, 18% of the energy generated for years 12-30, and 30% of the energy generated for beyond 30 years.