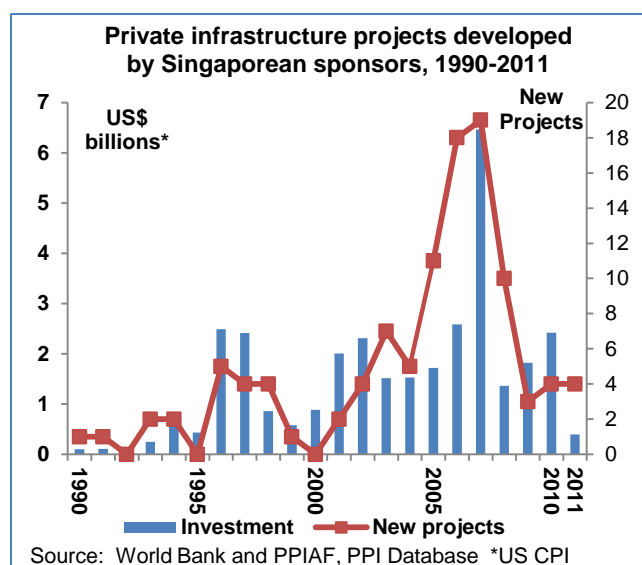


PRIVATE PARTICIPATION IN INFRASTRUCTURE DATABASE

March 2013

PPI Update Note 85

Snapshot: Sponsors from Singapore and Infrastructure Projects with Private Participation (1990-2011)



Introduction

A total of US\$38 billion in investment commitments, 107 infrastructure projects, 19 countries and 4 sectors: this is a quick snapshot of what Singaporean companies invested in private infrastructure projects from 1990 to 2011.¹ Nearly 67% of total investment and over 85% of all infrastructure projects were implemented after 2000. Private investment peaked in 2007 when Singaporean sponsors invested over US\$6.4 billion and developed a number of 19 new infrastructure projects.²

Top Sponsors	Projects	Largest Project (US\$)
PSA Corp	13	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	10	Chongqing Myujiankou HPP (China, 2005) US\$51.6 million
Sinomem Technology	9	Jilin Liaoyuan Wastewater Treatment Plant (China, 2008) US\$12.88 million
Asia Water Technology	8	Huangpi Sewerage Collection Network Project (China, 2007) US\$43.42 million
Hyflux	8	Magtaa Desalination Plant (Algeria, 2009) US\$468 million

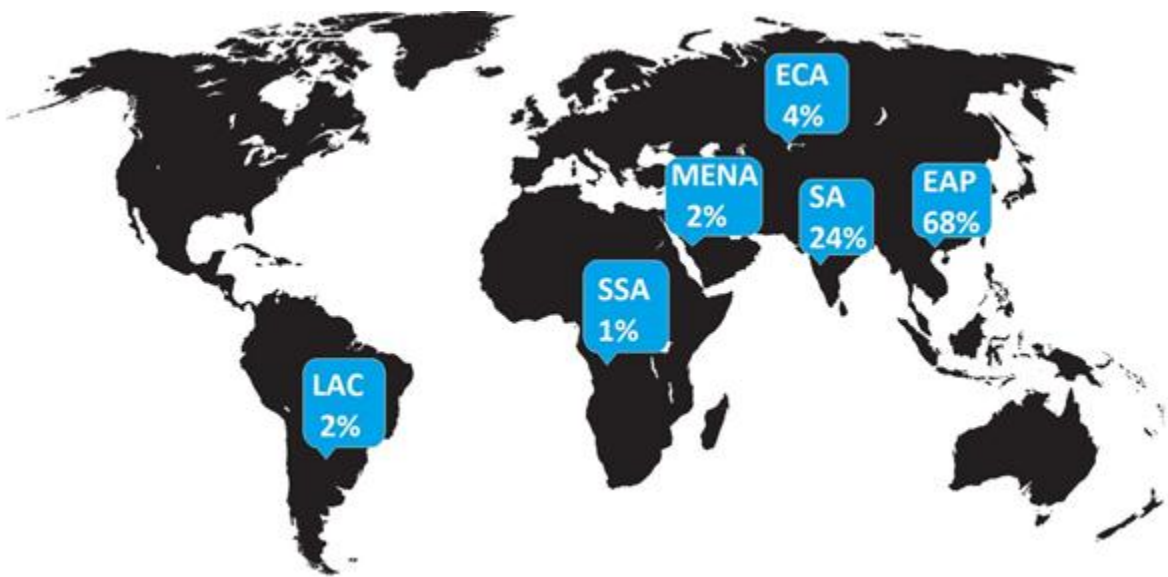
This note was written by Andreea Militaru, consultant at the Infrastructure Policy Unit; Transport, Water, Information and Communication Technology (TWI) Department; Sustainable Development Network; World Bank.

¹ The analysis includes projects in which Singaporean sponsors held an equity stake as of 2011. Cancelled projects and projects where Singaporean sponsors sold their equity participation before 2011 are not included.

² Total investment amounts have been adjusted using the US CPI values.

Regional breakdown

Singaporean sponsors invested mostly close to home: **East Asia and Pacific (EAP)** ranks as their number one destination for investment with a total volume of US\$21.5 billion (68% of all investment by Singapore sponsors) across 84 projects (78% of all projects by Singapore sponsors). In EAP, most of the investment was concentrated in greenfield telecom projects; the Philippines were the largest recipient of investment with US\$8.4 billion. Receiving over US\$7 billion of investments, Thailand ranked second among Singaporean investments abroad. In Thailand, Singaporean sponsors developed two greenfield projects: the Bangkok Co-Generation Company, a 107MW diesel and natural gas plant, and Advanced Information Services, a telecom project.



China ranks third with over US\$4.2 billion of investment across 68 projects, the highest number of projects developed by Singaporean sponsors in any single country. Most of these projects (47) were water and sewerage projects. In 1990-2011, China has consistently been the largest emerging market for private water and sewerage projects. Half of all water and sewerage projects were developed in China.

South Asia (SA) was the second largest destination for Singaporean investment: sponsors invested over US\$7.7 billion dollars across 14 projects. Private activity was concentrated in India and Pakistan where Singaporean developers invested over \$4.1 billion and US\$3.3 billion, respectively.

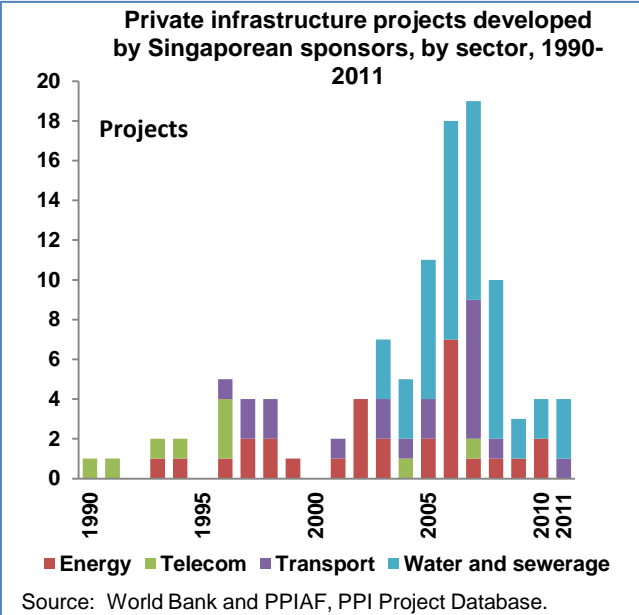
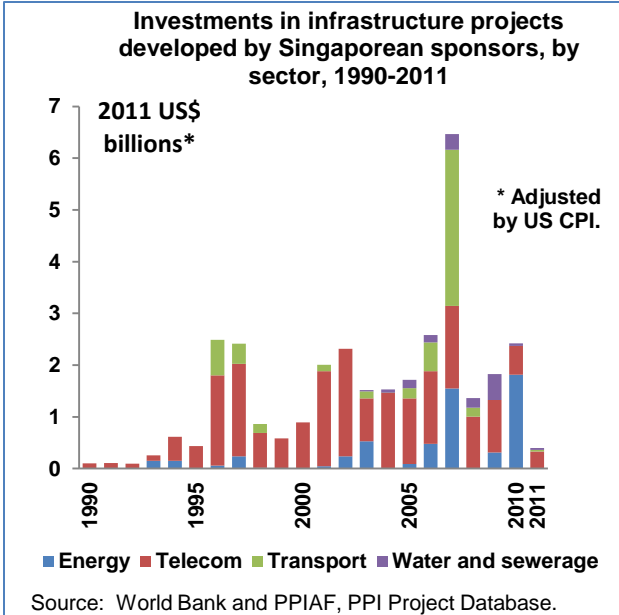
Eastern Europe and Central Asia (ECA) attracted 4.15% of the total amount invested. Singaporean sponsors were involved in projects in Turkey (US\$ 950 million for the Port of Mersin Concession), Kosovo (US\$429 million for IPKO, a greenfield telecom project), and the Russian Federation, where Singaporeans secured a management and lease contract for the Sheremteyev International Airport near Moscow.

Latin America and the Caribbean (LAC) and **Middle East and North Africa (MENA)** regions have each received 1.6% of total investment through six projects developed in Brazil (1), Nicaragua (1), Ecuador (2), and Algeria (2). Singaporean sponsors have had a very limited exposure to infrastructure projects in Africa, investing only US\$106 million (.3% of total investment) in one project – a 25-year seaport terminal concession in Gabon.

Most of the PPI investment undertaken by Singaporean sponsors was directed towards upper-middle income countries where they developed 73% of all projects, followed by lower-middle income countries (24% of all projects) and low-income countries (3%).³

Sector Breakdown

In terms of number of projects, Singaporean sponsors’ activity was concentrated in the **water and sewerage sector** where they developed 50 projects (of a total of 107), most of which consisted of greenfield water treatment facilities. An overwhelming majority of the water projects (47) were developed in China, followed by one project each in Malaysia, Indonesia and Algeria. The largest greenfield water treatment project developed by Singapore-based sponsors consisted of building and operating six treatment plants in Danyang City, Jiangsu Province, China. Awarded via competitive bidding, the US\$57.2 million project is 100% owned by Singapore-based Asia Environment Holdings Ltd.



In **energy**, Singaporean sponsors developed 29 electricity generation projects with a total capacity of 5.3GW. Twenty-three of these were greenfield projects, four were concessions and two were

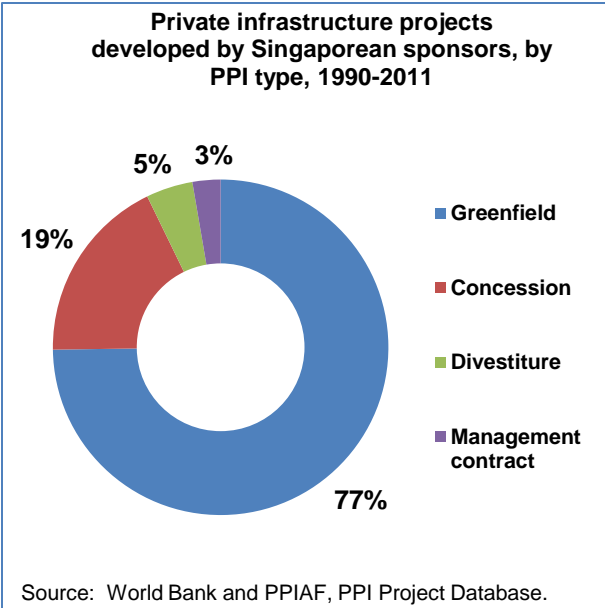
³ This analysis uses the World Bank’s country classification (July 2011), which groups developing countries in the following income categories: low-income countries (2011 GNI per capita of \$1,025 or less), lower-middle income countries (2011 GNI per capita of \$1,026 - \$4,035) and upper-middle income countries (2011 GNI per capita of \$4,036 - \$12,475).

divestitures. The majority of these projects (65%) were developed in EAP, especially in China (12); seven were developed in South Asia and only three in LAC. The largest greenfield energy generation project was a 1,200MW hydro power plant located in North Sikkim, India. The project reached financial closure in 2007 and had an estimated project cost of \$1.24 billion. The project’s majority shareholder was Asian Genco, a Singapore-based developer.

Transport ranks as the third most attractive sector for Singaporean sponsors with 20 projects developed, half of which were developed in EAP alone. All but two transport projects involved the construction and/or rehabilitation and operation of seaport terminals. The remaining two projects were airport management contracts in China and Russia. The largest greenfield seaport terminal project, Tianjin Port North Gangchi Container Terminal Phase III, was developed in China. It was estimated to cost US\$825.7 million. The project’s designed capacity was 4 million TEUs, making the container capable of handling super mega container ships. The project was a joint venture between Tianjin Port (51%) and Singapore-based PSA Corp. (49%).

Telecommunications projects saw very limited engagement from Singaporean sponsors. Only nine projects developed, most of which were greenfield mobile projects in EAP. One of the largest greenfield mobile projects, IPKO, was developed in 2007 by a joint venture between Telekom Slovenija and Singapore-based IPCO International Ltd. The initial total project cost was US\$285million: US\$99 million for the license fee and US\$176 million for the development of the network.

Risk sharing and bidding

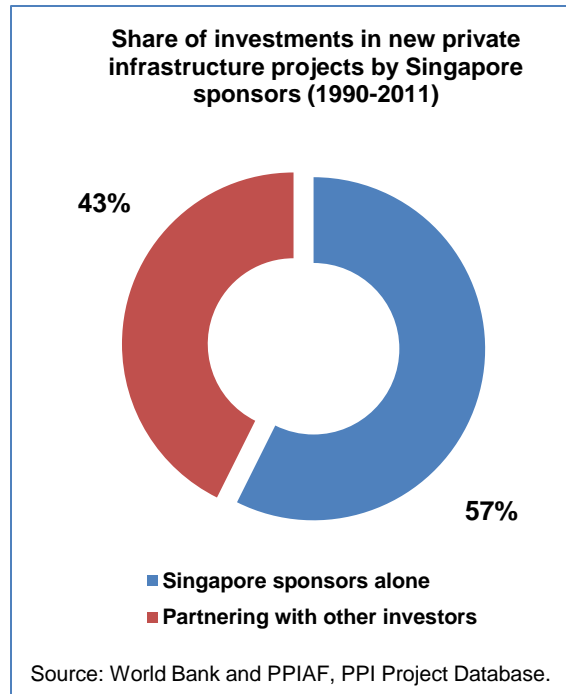
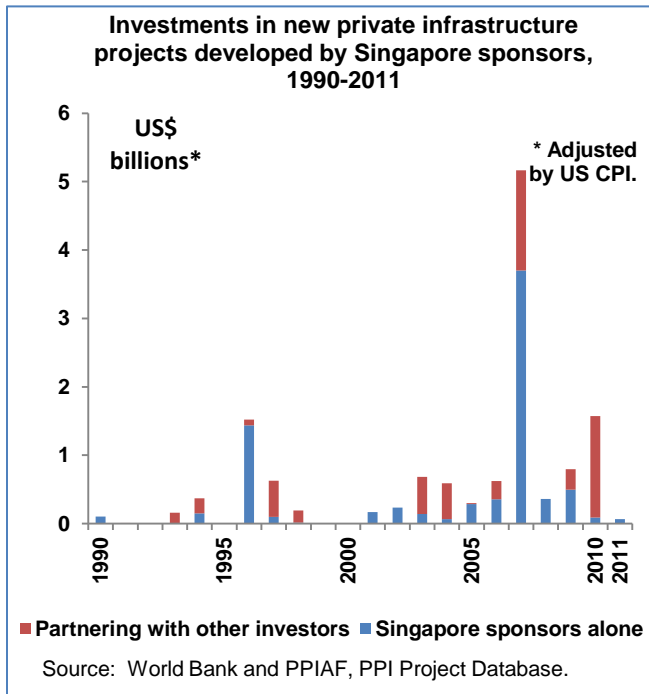


In terms of the contractual risk allocation of private infrastructure projects, Singaporean sponsors were mostly involved in greenfield projects. These have a higher risk profile and higher investment amounts. Greenfield projects were predominant across all sectors – electricity generation projects, water treatment projects, seaport terminal projects and mobile telecom projects.

More than half of the time, Singaporean sponsors participate in projects that were awarded via competitive bidding (57%)⁴. Projects awarded through direct negotiation have also been favored. Exposure to projects awarded through competitive negotiation or license schemes has been minimal.

⁴ Award method data was available for only 54 projects.

Financing of projects



2007 marked a steep increase in the number of projects developed by Singapore-based sponsors, and consequently in the amount of total investment committed. The largest energy and transport project reached financial closure in that year. For 75% of the projects developed since 1990, Singapore sponsors were the sole sponsors while for the remaining share of the projects they formed joint ventures with domestic or foreign sponsors, or entered a consortium of three sponsors. Four greenfield projects developed in Vietnam, China, Ecuador and Kosovo received funding from multilateral institutions in the form of guarantees, political risk insurance (MIGA) and loans (European Investment Bank, Asian Development Bank).

Featured project

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

The Teesta III Hydro Electric Project was a 1,200 MW (six units of 200 MW each) project located in North Sikkim, India. The project was developed by Teesta Urja Limited (TUL). TUL signed an agreement with the Government of Sikkim (GoS) in July 2005 for implementation of the project on a Build-Own-Operate-Transfer (BOOT) basis for a period of 35 years. Teesta Urja Limited (TUL) was formed by a consortium of companies led by Asian Genco (50.1%) and integrated by PTC India Limited (11%), Athena Projects Pvt. (13%), and Government of Sikkim (26%). Asian Genco was a Singapore-based developer. The shareholding pattern of these members was not known at the time of collection of information.

At the time of signing of the concession agreement, TUL held 74% stake in the project and Government of Sikkim (GoS) held the remaining 26% stake. In April 2008, Power Trading Corporation (PTC) India Limited acquired 11% stake in the project, thereby reducing the stake of TUL to 63%. The equity participation of GoS did not involve any 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 in the form of free power to the extent of 12% of the energy generated from the project for the first 12 years, 18% of the energy generated for 12-30 years and 30% of the energy generated for beyond 30 years. TUL has signed a PPA with PTC India Limited, a power trading company for the saleable power generated from this project.

The project was awarded by the Government of Sikkim by way of competitive bidding on the basis of the highest upfront premium paid to the Government of Sikkim.

The project was expected to cost US\$ 1,426.38 million and achieved financial closure in September 2007. A consortium of banks with Rural Electrification Corporation in the lead provided the debt for the project. The project was expected to achieve commercial operation in the Eleventh Five year Plan (2007-2012).