

## INDUSTRY OVERVIEW

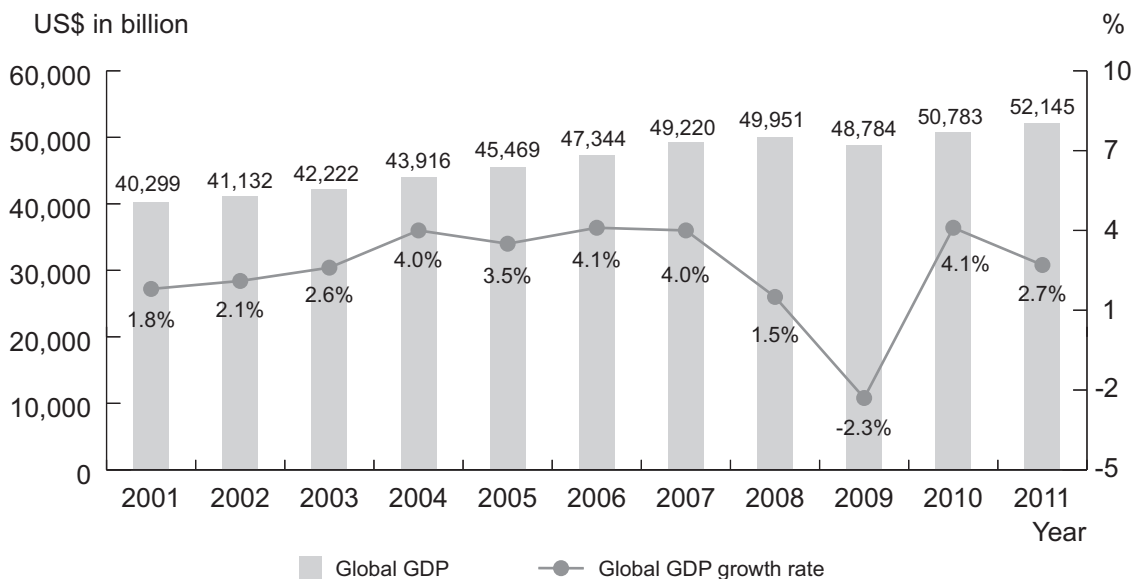
*This section contains information and statistics primarily relating to the infrastructure engineering industry and trading industry globally and in particular in the developing countries. We have derived such information and statistics from the Ipsos Report. See “Sources of Information” below. We believe that the sources of such information are appropriate sources for such information and have exercised reasonable care in compiling and reproducing such information. We have no reason to believe that such information is false or misleading or that any fact has been omitted that would render such information false or misleading. However, none of our Company, the Sole Global Coordinator, the Joint Bookrunners, the Sole Sponsor, the Underwriters, or any other parties involved in the Global Offering has independently verified the information and statistics derived from the Ipsos Report, nor do they make any representation as to the correctness, accuracy, completeness or fairness of such information and statistics. Accordingly, you should not unduly rely on such information and statistics contained in this section.*

### OVERVIEW

#### Overview of Global Economy

The global GDP has grown at a CAGR of approximately 2.6% from 2001 to 2011. In 2009, the global GDP declined by approximately 2.3% mainly due to the economic downturn in the developed countries in North America and Western Europe. Despite the financial crisis in late 2008 and early 2009, the global GDP in 2010 picked up and even exceeded the pre-financial crisis level. The following chart shows the global GDP and the global GDP growth rate for the periods specified.

**Global GDP Trend from 2001 to 2011**



*Note:* Gross domestic product at constant price for baseline in billions of 2005 dollars.

*Source:* Economic Research Service (January 2012), which is a primary source of economic information and research in the US Department of Agriculture

The significant economic growth of the developing countries, especially in Asia, drove the rapid rise in GDP in 2010 at a growth rate of approximately 7.7%. The economic growth in China, India and countries in Asia was the major driving force for the rapid rise of the global GDP growth in 2010. The GDP in the developed countries also increased but at a slower rate of approximately 5.9% due to high unemployment rate and budget deficit.

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Sovereign debt crisis that emerged in 2011 impeded the construction development mainly in the US and Europe, and reduced the developed economies' contribution to global growth in the short run. Much of construction-related spending from the economic stimulus programs may be stopped, reduced and/or being replaced by austerity measures to cut debt, especially in the European countries. The market turmoil also limited many countries' ability to invest in costly projects and hampered investors' confidence in new project investment. With national budgets trimmed and the European economies suffering from fiscal burdens, national allocations to development institutions and multilateral agencies were also being scaled back, leaving less allocation to construction projects.

### **Global Trend of Government Spending on Infrastructure**

The onset of financial crisis in late 2008 and early 2009 has increased political risks thereafter, especially in developing countries. Governments worldwide began to stabilize the political environment through accelerating economic growth, in particular, infrastructure spending. This kind of stimulus contributed to approximately 1.4%, 1.9%, 2.0%, 1.4%, 0.8% and 1.5% of the GDP of United Kingdom, United States, China, Japan, Australia and Canada, respectively. Types of infrastructure include power, transportation, telecommunications, water and sewage and other public-works projects.

Asia's economy was less affected by the global financial crisis, and it has been recovering after its own regional crisis. Most regional governments in Asia have announced plans to invest in more than US\$600 billion over the next several years on regional infrastructure after the financial crisis in 2009. Renewable energy projects have also been a growing trend in Asia.

The Middle East's oil-importing countries were affected by the straitened credit conditions as a result of the global financial crisis which diminished investors' appetite. To improve the economy, the Middle East's governments pledged over US\$100 billion on high-speed railway projects and water and renewable engineering.

Africa's economic growth was slowed down during the global financial crisis and it was gradually recovering after the crisis. Several governments, including the Federal Democratic Republic of Ethiopia, the Republic of Mozambique and the Republic of Botswana, aimed to develop infrastructure projects such as water ports, bridges and raw water pumping stations. Moreover, the African Development Bank also proposed to spend US\$10 billion on the development of infrastructure from 2011 to 2015.

### **GDP in Developing Countries<sup>(1)</sup>**

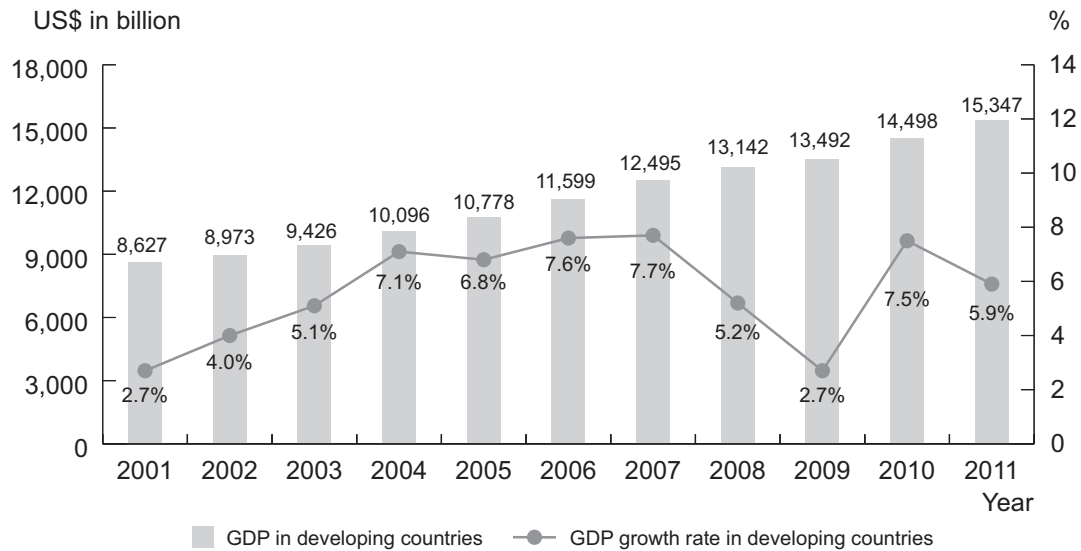
The GDP in developing countries has grown faster than that of developed countries over the past ten years. According to the Ipsos Report, transfers of investments from developed countries, foreign direct investment, shift of labor from agriculture to service industrial industries and trade liberalization fuelled the GDP growth in developing countries. Though adversely impacted by the global financial crisis from 2008 to 2009, a recovery in the GDP growth was supported by resurgence in international and domestic financial flow and higher commodity prices and saw a growth rate at approximately 5.9% as compared to the global GDP growth of approximately 2.7%.

*Note (1):* According to the World Bank in April 2012, developing countries refer to countries with low- and mid-income economies. The low- and mid-income economies are those with a gross national income per capita of less than US\$12,275. There are 146 developing countries, of which 32 are in East and South Asia and Pacific region (e.g. China, Sri Lanka, Indonesia, Myanmar, Cambodia), 30 are in Latin and Central America (e.g. Brazil, Chile, Colombia, Cuba), 7 are in the Middle East (e.g. Iran, the Republic of Yemen), 54 are in Africa (e.g. Angola, Chad, Republic of Congo, Sudan and Zimbabwe) and 18 are in Europe and Central Asia (e.g. Albania, Belarus, Romania).

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The following chart shows the GDP and GDP growth rate of developing countries for the periods specified.

**Developing Countries GDP Trend from 2001 to 2011**



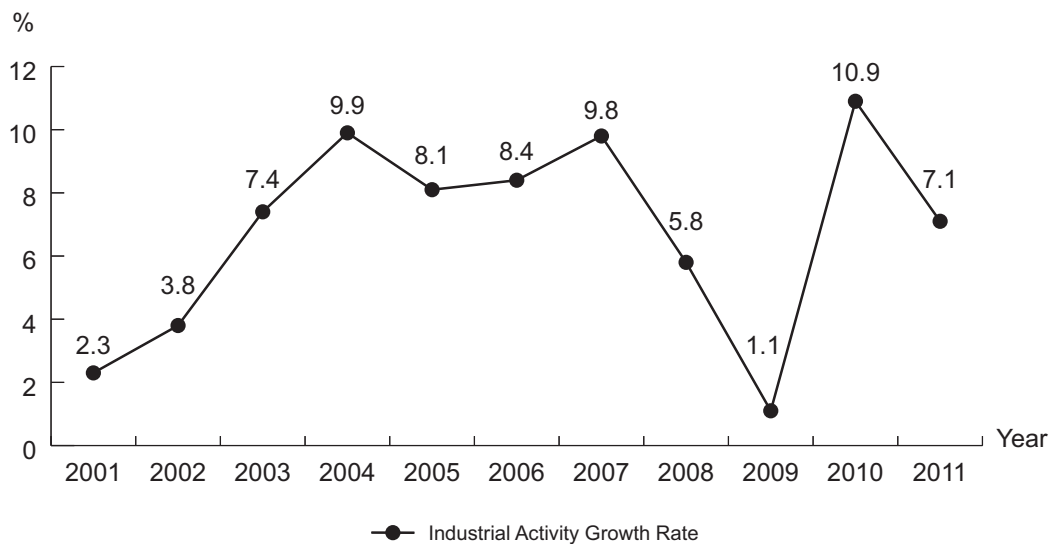
*Note:* Gross domestic product at constant price

*Source:* Economic Research Service (January 2012)

### Industrial Activities in Developing Countries

As the room for growth for industrial activities in developed countries has narrowed due to the maturity of these markets, the focus of industrial activities has shifted from developed countries to developing countries from 2001 to 2011. The following chart shows the growth rate of the value of output of industrial activities in developing countries for the periods specified.

**Growth Rate of Industrial Activities in Developing Countries from 2001 to 2011**



*Source:* World Bank; International Monetary Fund (January 2012)

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After the financial crisis and during the global recession, industrial activities in developing countries significantly slowed down, as a result of delayed or reduced investments, expansions and productions. As the global economy had been recovering gradually after the recession, the industrial activities in developing countries saw a fast increase at a growth rate of approximately 10.9% in 2010. The European sovereign debt crisis brought uncertainty to the market which slowed down the growth of industrial activities to approximately 7.1% in 2011.

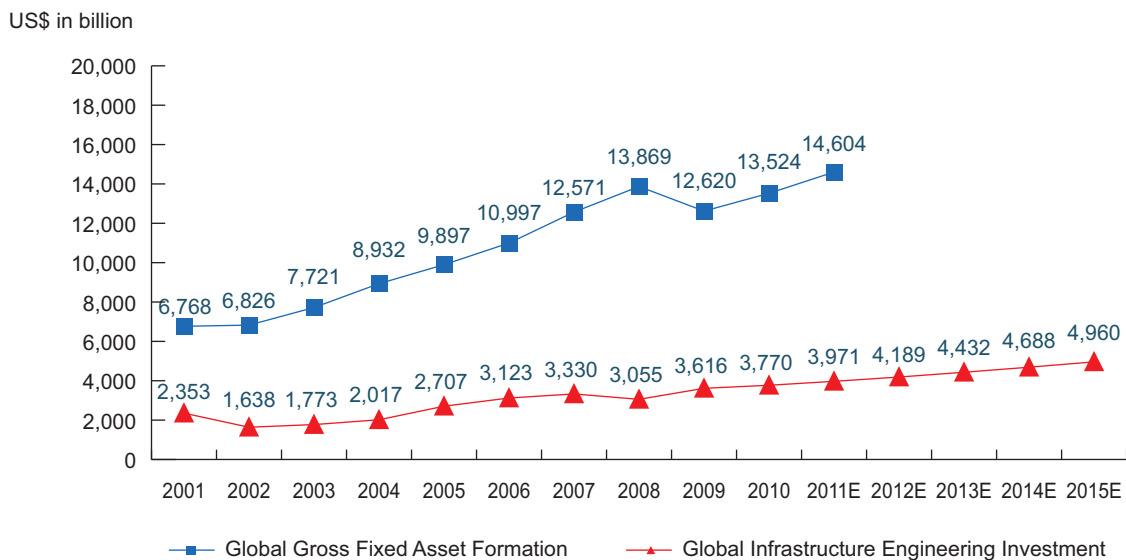
### INFRASTRUCTURE ENGINEERING INDUSTRY

#### Global Investments in Infrastructure Engineering

The gross fixed asset formation measures the net new investment in fixed capital assets. These fixed assets include land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. As infrastructure is a kind of fixed assets, hence, the gross fixed asset formation is a key factor in reviewing infrastructure engineering investment value as it contains any investments made by the governments and the private sector in those assets during the period.

Global gross fixed asset investments grew at CAGR of approximately 8.0% while global investments in infrastructure engineering grew at a CAGR of approximately 5.4% from 2001 to 2011. The following chart shows the historical global fixed asset investment values and the historical and estimated global infrastructure engineering investment for the periods specified.

**Global Fixed Asset Investment Value and Infrastructure Engineering Investment Value from 2001 to 2015E**



*Notes:*

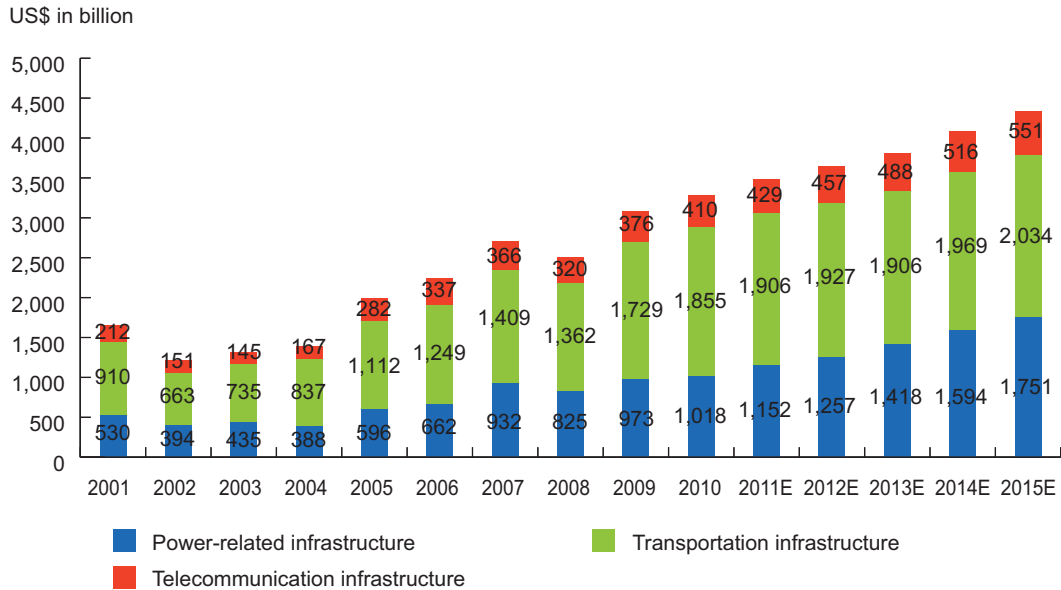
- (1) Fixed assets include land improvements (fences, ditches, drains, and so on); plant, machinery and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings.
- (2) Global infrastructure engineering investment includes power, transportation, telecommunications, petroleum, water, sewer waste, hazardous waste, industrial process, manufacturing and others.
- (3) E denotes estimated figures.

*Source:* World Bank (December 2011), Ipsos Report

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Among the various types of infrastructure engineering projects are power-related infrastructure engineering, transportation infrastructure engineering, and telecommunications infrastructure engineering which together accounted for approximately 87.8% of the total investment value in global infrastructure engineering for 2011. Investments in power-related infrastructure engineering, transportation infrastructure engineering, and telecommunications infrastructure engineering grew at a CAGR of approximately 8.1%, 7.7% and 7.3%, respectively from 2001 to 2011. The following chart shows the historical and estimated investment values in the global infrastructure engineering by these three infrastructure types for the periods specified.

**Global Infrastructure Engineering Investment Value  
by Infrastructure Types from 2001 to 2015E**



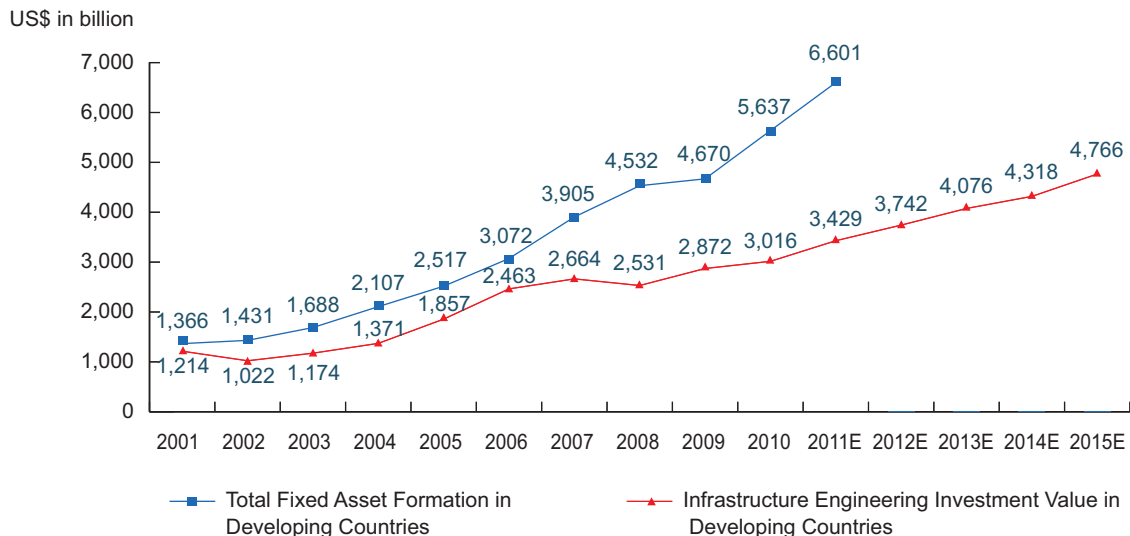
Note: E denotes estimated figures.

Source: Ipsos Report

### Investment in Infrastructure Engineering in Developing Countries

The following chart shows the historical fixed asset investment values and the historical and estimated infrastructure engineering investment, both for the developing countries, for the periods specified.

**Total Fixed Asset Investment Value and Infrastructure Engineering  
Investment Value in the Developing Countries from 2001 to 2015E**



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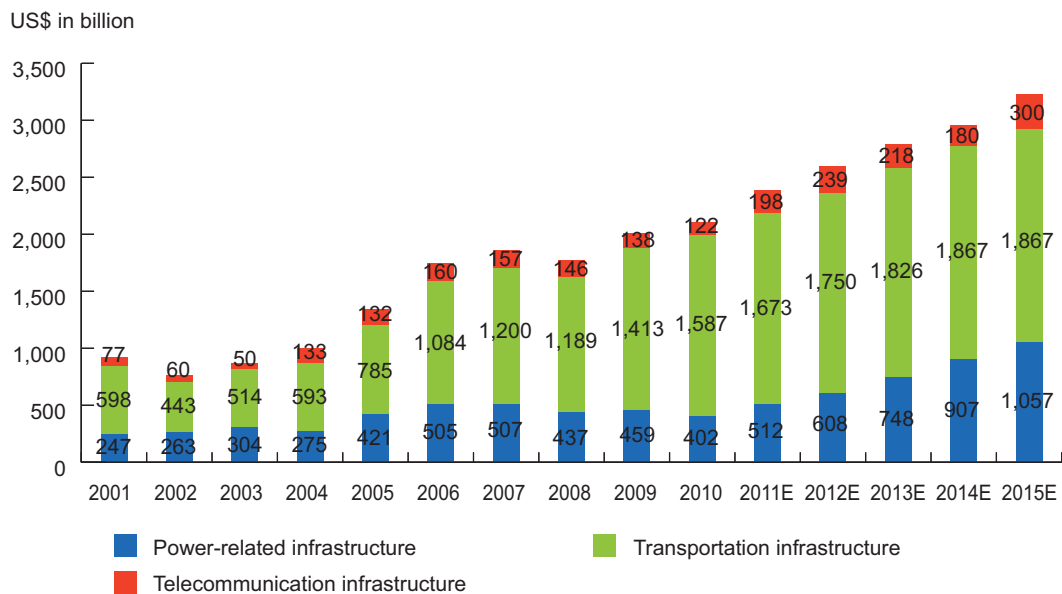
Notes:

- (1) Fixed assets include land improvements (fences, ditches, drains, and so on); plant, machinery and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings.
- (2) Infrastructure engineering investment includes power, transportation, telecommunications, petroleum, water, sewer waste, hazardous waste, industrial process, manufacturing and others.
- (3) E denotes estimated figures.
- (4) Ipsos' analysis on infrastructure engineering investment.

Source: World Bank (December 2011), Ipsos Report

The following chart shows the historical and estimated investment values in infrastructure engineering by infrastructure types in developing countries for the periods specified.

**Infrastructure Engineering Investment Value by Infrastructure Types  
in Developing Countries from 2001 to 2015E**



Note: E denotes estimated figures.

Source: Ipsos Report

Investment value for transportation, power and telecommunications infrastructure engineering grew at a CAGR of approximately 10.8%, 7.6% and 9.9%, respectively, from 2001 to 2011. Investment value for transportation infrastructure engineering in developing countries grew at approximately 48.8% in 2011 and investment value for each of power and telecommunications infrastructure engineering accounted for approximately 14.9% and 5.8%, respectively, of the total investment value in developing countries in 2011.

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### ***Factors affecting development of infrastructure engineering industry in developing countries***

According to the Ipsos Report, there are generally six factors identified as affecting infrastructure engineering development in developing countries.

1. *Government policy and investment:* Government investment is almost the only source for the development of infrastructure engineering projects in developing countries, in which government policies direct the types of projects that the investment is applied to.
2. *Economic growth:* Fast growing economy and increase in investment generate the demand for infrastructure engineering and drive development of the developing countries. Fast growing economy also enables the government of a developing country to yearn for investment in the infrastructure engineering projects, in response to the demand in economic growth.
3. *Stability of political and social environment:* Stable political and social environment in developing countries is beneficial to easier financing and smooth launches of infrastructure engineering projects.
4. *Urbanization:* Developing countries are expected to take up nearly three quarters of the world's urban population by 2015. The inadequate infrastructure system of new megacities in developing countries will raise demand for infrastructure engineering development in all areas including power, transportation, water and telecommunications.
5. *Industrialization:* The focus of industrial activities in the past decade had shifted from developed countries to developing countries, especially the BRIC (Brazil, Russia, India, and China). On average, the growth rate of industrial activities in developing countries was at approximately 1.9% in 2001, and fluctuated according to the global economic situations to reach at approximately 11.0% in 2010. The rapid development of the industrial activities will require for the same degree of infrastructure development in all aspects including power, transportation and telecommunications.
6. *Inflation and currency fluctuations:* Inflation and currency fluctuations may increase the risk of investing into infrastructure engineering projects as the economies in developing countries grow, thus increasing the overall difficulty in cost control and affecting the development of the engineering contracting industry.

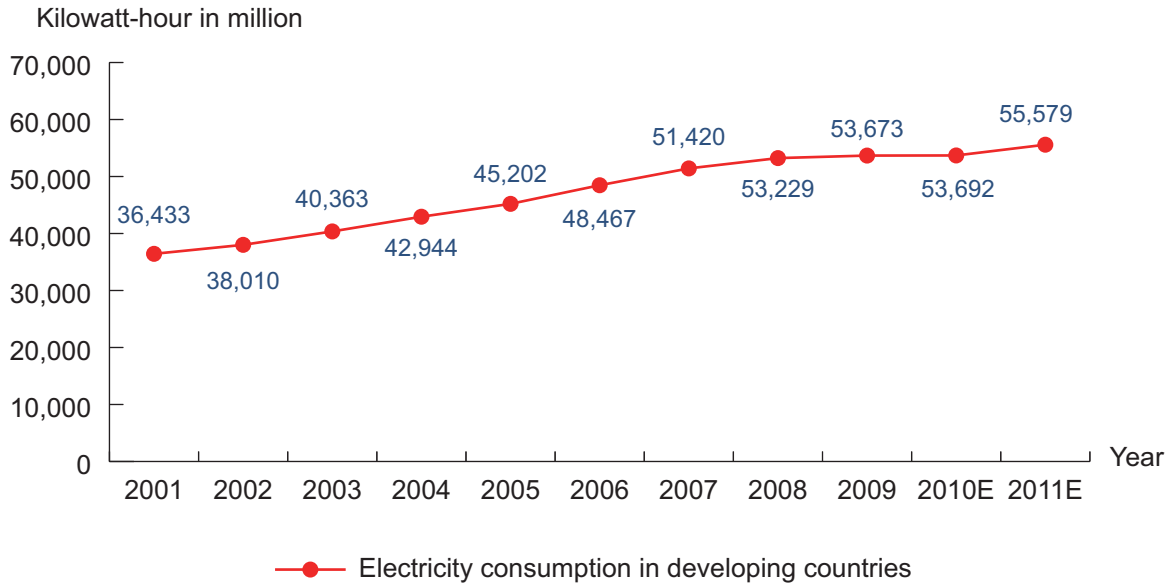
### **Overview of End-market Demand in Developing Countries**

#### ***Power Consumption in Developing Countries***

Electricity consumption in developing countries increased rapidly from 2001 to 2011 at a CAGR of approximately 4.3% due to the growth in population and rapid economic development, especially in the Asia-Pacific region and Brazil. Growth in electricity consumption slowed down in 2009 as a result of the global financial crisis. It rebounded in 2011 as the economy recovered, where growth increased by approximately 3.5% from 2010. Governments of developing countries especially Brazil and those in the Asia-Pacific region took initiatives to increase the availability of electricity to accommodate the accelerated electricity consumption. Inadequate power-related infrastructure in these developing countries would continue to raise demand for power-related infrastructure engineering in the next ten years. The following chart shows the total electricity consumption in developing countries for the periods specified.

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### Total Electricity Consumption in Developing Countries from 2001 to 2011E



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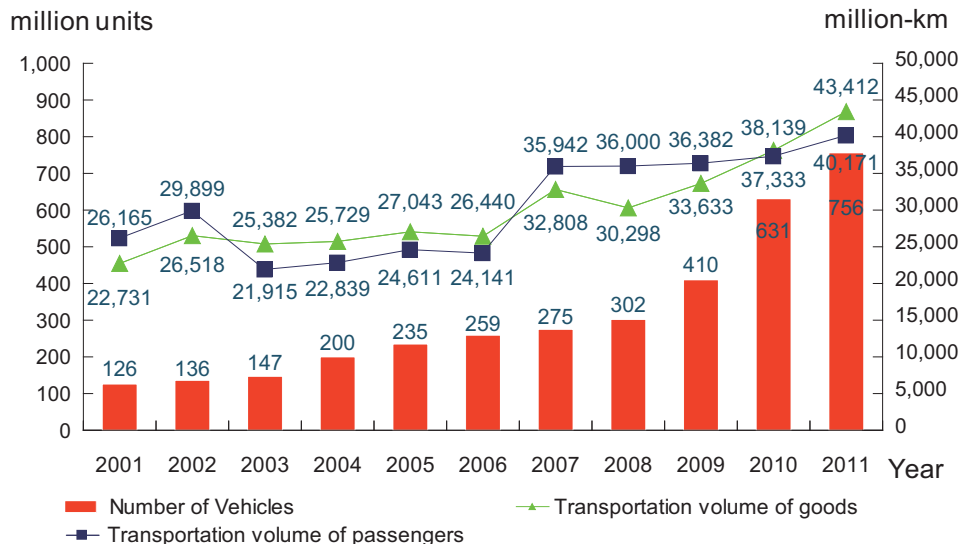
(1) Figures in 2010 and 2011 are estimated by Ipsos Hong Kong Limited.

Sources: World Bank (April 2012); Ipsos Report

### Transportation Volume in Developing Countries

The number of vehicles in developing countries increased significantly at a CAGR of approximately 19.6% from 2001 to 2011. Latin America and the Caribbean accounted for approximately 38.0% of the total number of vehicles in developing countries, followed by East Asia and the Pacific at approximately 25.0% in 2011. Transportation volume of goods by railway in developing countries grew at a CAGR of approximately 6.7%, which was faster than that of transportation of passengers by railway at a CAGR of approximately 4.4% from 2001 to 2011. The following chart shows the transportation volume of goods and passengers in developing countries for the periods specified.

### Transportation Volume of Goods and People in Developing Countries from 2001 to 2011





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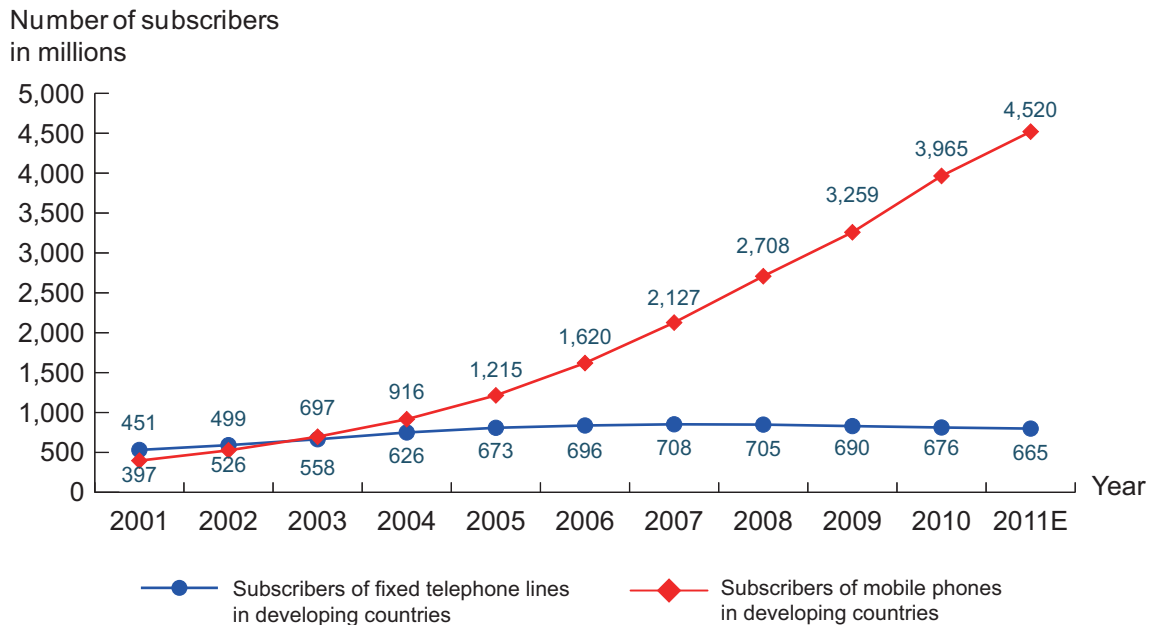
- (1) Goods transported by railway are the volume of goods transported by railway, measured in metric tons times kilometers traveled.
- (2) Passengers carried by railway are the number of passengers transported by rail times kilometers traveled.

Source: Ipsos Report

### Telecommunications Service Demand in Developing Countries

The number of subscribers of mobile phones grew faster than that of fixed telephone lines in developing countries, at a CAGR of approximately 27.5% from 2001 to 2011, compared to approximately 3.9% for the same period. In 2010, the number of mobile phone subscribers reached approximately 5.4 billion globally, of which developing countries accounted for approximately 74.0%. Access to mobile networks is now available to approximately 90.0% of the world population. Mobile phone penetration rate in developing countries increased from approximately 7.9% in 2001 to approximately 79.0% in 2011, covering approximately 4.5 billion of subscribers, mainly driven by the growth in Asia Pacific region. The following chart shows the penetration rate of fixed telephone lines and mobile phones in developing countries for the periods specified.

**Subscribers of Fixed Telephones Lines and  
Mobile Phones in Developing Countries from 2001 to 2011E**



Notes:

- (1) Fixed telephone lines refers to home-use telephones.
- (2) 2011 figures were estimated by the International Telecommunications Union.

Source: International Telecommunications Union (November 2011), which is the UN's specialized agency for information and communication technologies; Ipsos Report

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### Overview of International Engineering Contracting Industry

According to the Ipsos Report, the international engineering contracting industry is constituted by contractors from all over the world, with Chinese, European and American contractors outperforming their counterparts. International engineering contracting industry in the US and Europe was heavily impacted by the global financial crisis in 2008 while that in developing countries in Asia, Africa and Latin America was the engine for growth. Developing countries in Asia and Africa where large-scale infrastructure construction was being carried out, were less affected by the financial crisis. Transportation infrastructure engineering contracting projects alone contributed to approximately 48.0% and 32.1% of the total infrastructure engineering investment and total new contract value, respectively, in 2011. From 2006 to 2011, power-related infrastructure exhibited the strongest growth in new contract value at a CAGR of approximately 17.6% in the global market. Europe and the Middle East dominated in terms of the total value of global international contracting projects while growth in revenue was most significant for Latin America and Africa during the same period.

In terms of project management, EPC, BT (build-transfer), BOT (build-operation-transfer), DDB (develop-design-build), DBFM (Design-Build-Finance-Maintain) and FPDBFM (Finance-Procure-Design-Build-Facility-Management) are widely-used modes in international engineering contracting projects, which require the international contractors having strong project management, technology as well as financing or investment capabilities. In 2010, the general EPC infrastructure projects accounted for approximately 50.0% of the total infrastructure projects from Chinese contractors and a majority of these projects exceeded US\$100 million per project in value on average.

International engineering investors are increasingly looking for a single contracting company with one-stop service offering comprehensive solution instead of assigning different companies with single function. In the bidding process of international contracting projects, capital assets and credibility are becoming increasingly more important to engineering project investors in the selection of the infrastructure contractor. Infrastructure financing practice is replacing traditional cash-based settlement. Export seller's credit and export buyer's credit became progressively commonly used for financing of projects. As such, lack of financial strength will restrict the ability of infrastructure engineering development.

Private sector participation is expected in the long-term to raise the enormous amount of capital required to fund infrastructure engineering projects. The government alone would not be able to meet the expanding demand. Private sector participation accounted for less than 30% of total investment in infrastructure in 2010. In the long run, the demand for infrastructure construction will require greater need for private sector's involvement. In 2010, approximately 61 developing countries had approximately 440 private projects participating in infrastructure projects that were seeking investment commitments of approximately US\$174 billion.

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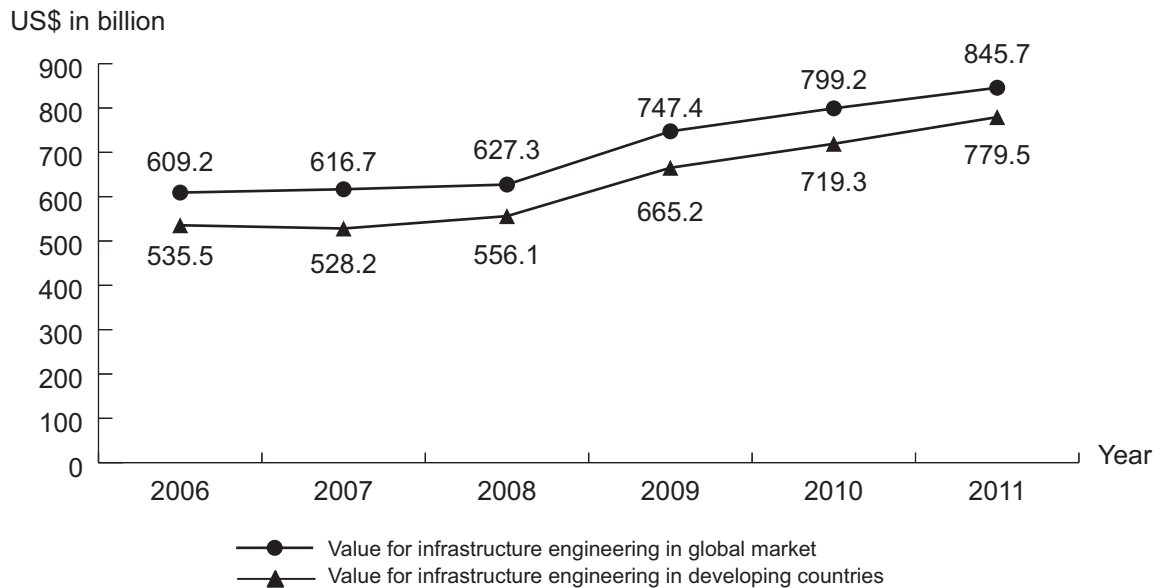
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### New Contracts of Infrastructure Engineering

Total new contract value of infrastructure engineering projects for developing countries grew faster than that for the global market from 2006 to 2011 at a CAGR of approximately 7.8%. The economic downturn had minimal impact on developing countries' infrastructure engineering projects because these projects are usually funded by the governments. The following chart shows the total new contract value of infrastructure engineering projects for the global market and in the developing countries for the periods specified.

**Total New Contract Value of Infrastructure Engineering Projects for Global Market and in Developing Countries from 2006 to 2011**



Note:

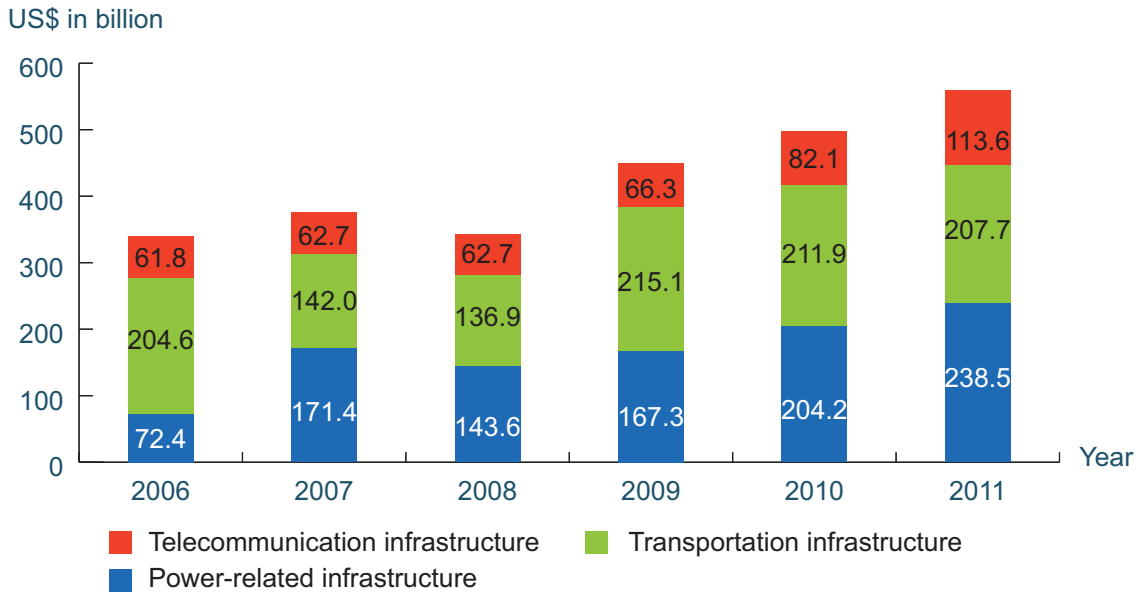
- (1) Infrastructure engineering projects include power, transportation, telecommunications, petroleum, water, sewer waste, hazardous waste, industrial process, manufacturing and others.

Source: Ipsos Report

In developing countries, the total new contract value of infrastructure engineering projects was approximately US\$779.5 billion in 2011. The new contract value of power-related infrastructure engineering projects grew the fastest among these three types of projects (power, transportation, telecommunications) at a CAGR of approximately 26.9% from 2006 to 2011 to reach approximately US\$238.5 billion in 2011. The new contract value of transportation and telecommunications grew at a CAGR of approximately 0.3% and 12.9%, respectively, during the same period. Support from both the government and private sector in infrastructure spending gave a boost to infrastructure work. New contract value of power, transportation and telecommunications projects together accounted for approximately 71.8% of the total new contract value in 2011, of which power, transportation and telecommunications projects each accounted for approximately 30.6%, 26.6% and 14.6% of the total value, respectively. The following chart shows the new contract value of infrastructure engineering projects by infrastructure types in developing countries for the periods specified.

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### New Contract Value of Infrastructure Engineering Projects<sup>(1)</sup> by Infrastructure Types in Developing Countries from 2006 to 2011



Note:

- (1) Infrastructure engineering projects include power, transportation, telecommunications, petroleum, water, sewer waste, hazardous waste, industrial process, manufacturing and others.

Source: Ipsos Report

### Equipment Export for Engineering

Equipment for power, telecommunications and petrochemical engineering projects is the main export item in the global market. China is one of the main countries in exporting equipment for international engineering projects. Among all types and combinations of equipment export, export of complete sets of equipment played a key role in the growth of China.

Export of mechanical and electrical products was seriously affected by the global financial crisis and declined approximately 13.4% in 2009 while export of complete sets of equipment increased by approximately 13.0% in the same period. In general, developing countries in Southeast Asia, Middle East and North Africa were key export destinations of the engineering equipment in the world.

### CHINESE CONTRACTORS IN THE INTERNATIONAL INFRASTRUCTURE ENGINEERING CONTRACTING MARKET

There were approximately 3,000 Chinese contractors operating in over 180 countries worldwide, providing a full spectrum of infrastructure engineering contracting services. According to ENR's top 225 international contractors list, among the top 225 contractors in the world, 50 were Chinese contractors in 2011. In recent years, power, transportation and telecommunications-related infrastructure projects increased rapidly, and together accounted for approximately 80% of the new infrastructure engineering contract value by Chinese contractors in 2011. Power, transportation and telecommunications projects accounted for approximately 21.9%, 19.0% and 10.4% of the total new contract value in international engineering in 2011, respectively. In 2011, there were 498 new projects signed by the Chinese contractors with each worth more than US\$50

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million in value (as opposed to 488 projects in 2010), accounting for approximately 79.0% of the total newly signed contracts among Chinese contractors. Approximately 20 new projects' contract value exceeded US\$1 billion in 2011, as opposed to 14 in 2010.

With strong financial support from the Chinese government, Chinese contractors typically prefer to invest in developing countries where they enjoy some advantages including advanced technological acumen, better business management skills and easier access to capital over their competitors in these countries. On the other hand, China's international engineering contracting business, which began in the Middle East in early 1980s, expanded rapidly into developing Asian markets over the past decade and was moving into the European and American markets.

The following table sets forth the revenue of the Chinese contractors generated from international infrastructure engineering projects in the global market in 2011.

Rank	Region	Revenue of Chinese contractors in 2011	
		(US\$ billion)	(%)
1	Asia Pacific .....	53.4	51.6
2	Africa .....	36.1	34.9
3	Latin America .....	7.9	7.7
4	Europe .....	4.6	4.4
5	North America .....	1.4	1.4
	<b>Total</b> .....	<b>103.4</b>	<b>100.0</b>

Source: Ipsos Report

The following table sets forth the new contract value of the Chinese contractors by types of international infrastructure engineering projects in the global market in 2011.

Rank	Type of international infrastructure engineering and construction	New Contract Value	Value Contribution
		(US\$ billion)	(%)
1	Power .....	31.1	21.9
2	Housing construction .....	27.8	19.5
3	Transportation .....	27.1	19.0
4	Petrochemical .....	18.1	12.7
5	Telecommunications .....	14.8	10.4
6	Water and sewage .....	5.7	4.0
7	Manufacturing .....	5.4	3.8
8	Mining and metals .....	1.7	1.2
9	Environment protection .....	0.4	0.3
10	Others .....	10.2	7.2
	<b>Total</b> .....	<b>142.3</b>	<b>100.0</b>

Source: Ipsos Report

Aside from price, size of contractors, maturity of technology, management capability, capital and adaptability, there are three major reasons driving the development of Chinese contractors in international infrastructure engineering market.

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- *Abundant workforce supply and lower labor cost*

Over the past three decades of China's reform and internationalization, Chinese contractors are able to send more qualified workers and resources to designated infrastructure construction sites worldwide to meet tight deadlines and achieve cost effectiveness. The number of Chinese workers assigned to overseas infrastructure engineering sites was approximately 243,000 in 2011.

- *Fast development of China's infrastructure engineering technology*

In the past, most of the international engineering projects undertaken by the Chinese contractors were low-valued projects such as construction and civil works. Nowadays, the strength of advanced infrastructure technology and skills demonstrated by the Chinese contractors led to a significant increase in the value of projects, which exceeds US\$100 million in value on average.

- *Equipment export by China*

China's complete sets of plants and equipment enjoy comparative advantages such as affordable pricing and simple operation over those of developed countries after several decades of development. Such characteristics offer a great match to the economic and cultural development of other developing countries. Huawei Technologies, Co., Ltd. (華為技術有限公司), Sinohydro Corporation (中國水利水電建設集團公司), China National Electric Engineering Co., Ltd. (中國電力工程有限公司), China Petroleum Engineering & Construction Corporation (中國石油工程建設(集團)公司) and CMEC are key exporters of construction and engineering equipment in China.

### Top Chinese Contractors in International Engineering (Non-Sector Specific)

The following table sets forth the ranking of the Chinese contractors of international engineering (non-sector specific) in the global market in 2011.

#### Top Chinese Contractors of International Engineering in Global Market (Non-Sector Specific) in 2011

Rank	Name of Company	Revenue <sup>(1)</sup> of International Engineering in 2011 <i>(US\$ million)</i> <sup>(2)</sup>
1	China Communications Construction Group .....	4,981
2	Sinohydro Corporation .....	4,470
3	China State Construction Engineering Corporation .....	4,349
4	China Railway Group Ltd. ....	2,760
5	China Railway Construction Corporation .....	2,665
6	CITIC Construction Co., Ltd. ....	2,274
7	China Metallurgical Group Corporation .....	2,165
8	China Petroleum Engineering & Construction Corporation .....	2,141
9	SEPCO III Electric Power Construction Corporation .....	2,020
10	Our Company .....	1,866
	Others .....	73,729
	<b>Total</b> .....	<b>103,420</b>

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*Notes:*

- (1) Revenue of international engineering is the income generated by the Chinese contractors from their business of international engineering contracting in the world excluding China due to the following reasons: (1) consistent with the ranking of ENR's top 225 international contractors list, "international engineering contracting" by nature should only relate to engineering contracting outside of the home country of the contractor in order to be considered "international"; and (2) our Company focuses on international engineering contracting projects outside of the PRC and during the Track Record Period, out of the 53 projects completed by our Company, only two of them were located in the PRC.
- (2) US\$1=RMB6.4594 in 2011.

*Source:* Annual reports of the corresponding companies in 2010; MOFCOM, China (January 2011); Ipsos Report

### Top Chinese Contractors in International Engineering in Power Sector

The following tables set forth the respective rankings of the top five Chinese contractors in terms of international power projects in the global market in each of the past five years from 2007 to 2011.

#### Top Chinese Contractors by International Power Projects in Global Market in 2007

Rank	Name of Company	Revenue from International Power Projects in 2007 <i>(US\$ million)</i>	Share by Revenue in 2007 <i>(%)</i>
1	Our Company .....	890.1	19.9
2	Sinohydro Corporation .....	556.0	12.4
3	Shandong Electric Power Construction Corp. ....	378.9	8.5
4	Shanghai Electric Group Co., Ltd. ....	348.7	7.8
5	Harbin Power Engineering Co., Ltd. ....	230.6	5.2
	Others .....	2,066.4	46.2
	<b>Total</b> .....	<b>4,470.7</b>	<b>100.0</b>

#### Top Chinese Contractors by International Power Projects in Global Market in 2008

Rank	Name of Company	Revenue from International Power Projects in 2008 <i>(US\$ million)</i>	Share by Revenue in 2008 <i>(%)</i>
1	Our Company .....	1,217.5	14.3
2	Sinohydro Corporation .....	1,183.0	13.9
3	Shanghai Electric Group Co., Ltd. ....	742.1	8.7
4	SEPCOIII Electric Power Construction Corporation .....	710.0	8.4
5	Shandong Electric Power Construction Corp. ....	433.9	5.1
	Others .....	4,206.3	49.6
	<b>Total</b> .....	<b>8,492.8</b>	<b>100.0</b>

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### Top Chinese Contractors by International Power Projects in Global Market in 2009

Rank	Name of Company	Revenue from International Power Projects in 2009 <i>(US\$ million)</i>	Share by Revenue in 2009 <i>(%)</i>
1	Our Company .....	1,514.4	10.3
2	Sinohydro Corporation .....	1,194.9	8.1
3	SEPCOIII Electric Power Construction Corporation .....	1,012.7	6.9
4	Shanghai Electric Group Co., Ltd. ....	847.9	5.7
5	Shandong Electric power construction Corp. ....	707.9	4.8
	Others .....	9,486.4	64.2
	<b>Total</b> .....	<b>14,764.2</b>	<b>100.0</b>

### Top Chinese Contractors by International Power Projects in Global Market in 2010

Rank	Name of Company	Revenue from International Power Projects in 2010 <i>(US\$ million)</i>	Share by Revenue in 2010 <i>(%)</i>
1	Sinohydro Corporation .....	2,567.5	13.9
2	SEPCOIII Electric Power Construction Corporation .....	1,579.8	8.6
3	Our Company .....	1,393.4	7.6
4	Shanghai Electric Group Co., Ltd. ....	925.8	5.0
5	Harbin Electric International Co., Ltd. ....	886.0	4.8
	Others .....	11,087.5	60.1
	<b>Total</b> .....	<b>18,440.0</b>	<b>100.0</b>

### Top Chinese Contractors by International Power Projects in Global Market in 2011

Rank	Name of Company	Revenue from International Power Projects in 2011 <i>(US\$ million)</i>	Share by Revenue in 2011 <i>(%)</i>
1	Sinohydro Corporation .....	2,234.9	11.2
2	SEPCOIII Electric Power Construction Corporation .....	2,019.6	10.1
3	Shandong Electric Power Construction Corporation .....	1,535.5	7.7
4	Our Company .....	1,481.5	7.4
5	Shanghai Electric Group Co., Ltd .....	999.0	5.0
	Others .....	11,649.5	58.6
	<b>Total</b> .....	<b>19,920.0</b>	<b>100.0</b>



## INDUSTRY OVERVIEW

*Notes:*

- (1) Revenue of international engineering is the income generated by the contractors from their respective business of international engineering contracting in the world excluding China.
- (2) 2007: US\$1=RMB7.6040  
 2008: US\$1=RMB6.9415  
 2009: US\$1=RMB6.8310  
 2010: US\$1=RMB6.7693  
 2011: US\$1=RMB6.4594

*Sources:* Annual reports of the corresponding companies; Ministry of Commerce, PRC (January 2011 and 2012); Ipsos Report

The following table sets forth the rankings of the top five Chinese contractors in terms of international power projects in the global market based on their accumulated revenue from 2007 to 2011.

### Top 5 Chinese Contractors in International Power Projects in Global Market based on Accumulated Revenue from 2007 to 2011

Rank	Name of Company	Accumulated Revenue from International Power Projects from 2007 to 2011 <i>(US\$ million)<sup>(1)</sup></i>	Share by Accumulated Revenue from 2007 to 2011 <i>(%)</i>
1	Sinohydro Corporation .....	7,736.3	11.7
2	Our Company .....	6,496.9	9.8
3	SEPCOIII Electric Power Construction Corporation .....	5,548.6	8.4
4	Shanghai Electric Group Co., Ltd. ....	4,048.5	6.1
5	Shandong Electric Power Construction .....	3,800.3	5.8
	Others .....	38,457.1	58.2
	<b>Total</b> .....	<b>66,087.7</b>	<b>100.0</b>

*Note:*

- (1) US\$1=RMB7.6040 in 2007  
 US\$1=RMB6.9451 in 2008  
 US\$1=RMB6.8310 in 2009  
 US\$1=RMB6.7693 in 2010  
 US\$1=RMB6.4594 in 2011

*Source:* Annual reports of the corresponding companies from 2007 to 2011; MOFCOM (January 2012); Ipsos Report

We believe that the above rankings based on accumulated revenue from the international power projects in the past five years present a reasonable, meaningful and balanced result by minimizing the impact of fluctuations in revenue generated by the various Chinese contractors that could be caused by the following reasons:

- Varying duration and relatively long life cycle of each engineering contracting project:*** Engineering contracting projects could last for more than a year from the point when revenue is recognized until the end of the retention period when the project is fully completed. In the case of our Company, the lifecycle of our Company's engineering contracting projects could vary from two years to five years or above.

## INDUSTRY OVERVIEW

2. **Nature of business:** Many of our Company's international engineering contracting projects are infrastructure projects. Infrastructure works are highly affected by external factors, such as the economic cycle and public spending policy, which usually last for an extended period of time and have a delayed impact on the macro-economy as a whole.
3. **Fluctuations in revenue:** Contractors may experience a sporadic increase in revenue in a certain year due to the stream of revenue brought forward by a certain project with high contract value signed in the previous year(s), which may lead to an abrupt increase in ranking.

See "Business – International Engineering Contracting Business – Competition" for more details regarding competition that our Company faces.

Furthermore, based on the financial data of the top 225 international contractors derived from ENR's top 225 international contractors list in 2011, we substituted SINOMACH with our Company in the list using our own revenue generated from our International Engineering Contracting Business in the power sector in 2010 (which is exclusive of the revenue generated by the Excluded Business of SINOMACH) to deduce our ranking among ENR's top 225 international contractors, which is set out in the following table.

### Top 10 International Contractors in the Global Power Market in 2011

Rank	Name of Company	International Revenue in Power Market (US\$ million)	Share by International Revenue (%)
1	Abeinsa Sa .....	2,213.7	5.7
2	Grupo Acs .....	1,837.5	4.8
3	Sinohydro Corporation.....	1,804.5	4.7
4	Hyundai Engineering & Construction Ltd. ....	1,637.4	4.2
5	SEPCOIII Electric Power Construction Corporation .....	1,579.9	4.1
6	Our Company .....	1,393.4	3.6
7	VINCI .....	1,324.6	3.4
8	Marie Tecnimont .....	1,297.1	3.4
9	Iberdrola Ingenieria Y Construction .....	1,215.9	3.1
10	Grupo Isolux Corsan Sa .....	1,196.1	3.1
	Others .....	23,154.1	59.9
	<b>Total</b> .....	<b>38,654.2</b>	<b>100.0</b>

*Notes:*

- (1) International revenue refers to revenue generated by the contractors from work outside their home countries in 2010.
- (2) Revenue of the companies (save for our Company) was extracted from ENR.
- (3) Revenue of our Company was derived from our Company.
- (4) US\$1=RMB6.7693 in 2010.

Sources: ENR; our Company

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## INDUSTRY OVERVIEW

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### Financing for Projects

The composition of the offerings in global project finance was quite different after the global financial crisis. After the global financial crisis, the portions of bonds and loans dropped sharply, while the financial products support by governments and multilateral agencies rose significantly.

The size and number of project finance deals also dropped significantly after the global financial crisis. There was a total of approximately US\$168.68 billion worth of global project finance deals in the second half of 2007, of which approximately 10.0% was funded in the form of bonds, approximately 71.0% in the form of loans, and approximately 2.0% in the form of support from the governments and multilateral agencies. In contrast, there was only approximately a total of US\$99.7 billion worth of global project finance deals in the first half of 2010, of which approximately 2.0% was funded in the form of bonds, approximately 62.0% in the form of loans, and approximately 18.0% in the form of support from the governments and multilateral agencies. There were 437, 693 and 677 global project finance deals in 2006, 2007 and 2008, respectively. Deal flow dropped in 2009 with 497 deals but recovered in 2010 with 612 deals due to an increase in non-recourse bank lending at approximately US\$156 billion and the recovery of capital markets in project finance transactions amounting to approximately US\$14 billion.

There are three types of financing for the infrastructure engineering projects, namely: contractor's fund, export seller's credit and export buyer's credit.

1. **Contractor's fund:** contractor uses its own funds to support the infrastructure engineering projects.
2. **Export seller's credit:** it is one of the common financing methods as the Chinese government encourages the Chinese contractors to export complete sets of plants and equipment to overseas engineering sites. The Chinese contractors are typically responsible for credit repayment while the project owners offer the Chinese contractors credible guarantee of repayment and the Chinese contractors purchase export credit insurance to ensure on-time repayment.
3. **Export buyer's credit:** it is one of the common financing methods as the Chinese government encourages the Chinese contractors to export complete sets of plants and equipment to overseas engineering sites. The project owners are typically responsible for credit repayment while the government of the export destination offers export credit insurance to ensure on-time repayment.

### Trends and Developments of Global International Engineering Contracting Demand

Increased government infrastructure investment and urbanization will raise demand for infrastructure engineering and engineering contracting subsequently. International engineering contracting demand is expected to increase globally from 2009 to 2015 as governments across the world increase their expenditure on infrastructure, especially in India, Middle East and North Africa.

The global financial crisis in 2008 has hampered infrastructure investment and raised the cost of financing, resulting in diminished private investment in new projects. In particular, investment in Central Asia<sup>(1)</sup> and Europe fell by approximately 54.0% between July 2008 and March 2009. India's infrastructure development attracted many global investments as its infrastructure sector for the

*Note:*

(1) Central Asia consists of the former Soviet nations including Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

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## INDUSTRY OVERVIEW

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11th and 12th Five-Year Plans require investment value of approximately US\$514 billion and US\$1 trillion, respectively. Many governments in the Middle East continued to invest in infrastructure to diversify the structure of their economies. This has drawn demand tremendously for international engineering contracting and will continue to provide business opportunities for the contractors around the world.

Furthermore, global international engineering contracting demand will rise in response to the growing urbanization and urban population, especially in East Asian region. Strong economic growth of developing countries coupled by the aging of infrastructure in developed countries is placing strong emphasis on infrastructure investment and cooperation. Urban population in East Asian region is expected to account for approximately 30.0% of the global urban population by 2030. The rapid development of both developing and developed countries will call for greater need of infrastructure including power, transportation and telecommunications facilities in the next 20 years.

Africa presents the greatest opportunities amongst all developing countries for engineering contracting demand in power, transportation and telecommunications projects. Electricity power constraint is hindering the growth of the African economy. As it stands today, only one in four Africans has access to electricity. A quarter of Africa's installed power generation capacity is not operational. Power constraint is the largest obstacle to doing business in Africa. Insufficient road in Africa is urging for significant infrastructure improvements. High cost of telecommunications services in Africa will raise demand for wider service coverage in the region. The pressing demand for power, transportation and telecommunications-related infrastructure at an annual budget of US\$93 billion is powering demand for engineering contracting, with power accounting for almost half of the entire budget.

Strong economic growth in Southeast Asia countries will prompt for infrastructure engineering in the next ten years. An estimated US\$8.2 trillion is needed for infrastructure investment from 2010 to 2020 in developing countries in Asia, among which approximately 49.0% is needed for power-related infrastructure, approximately 35.0% for transportation-related infrastructure and approximately 13.0% for telecommunications-related infrastructure.

The market downfall in many regions, particularly in Greece, Italy and Spain, has given ways for Chinese contractors with increasing capability to enter unfamiliar markets to exploit the market potential. By and large, more Chinese contractors will look for entry into unexploited markets, in addition to the developed countries such as Europe, in the future.

### **Competitive Landscape**

Price, size of contractors, maturity of technology, management capability, capital and adaptability are important consideration factors in the selection of contracting companies. The competitiveness of Chinese contractors is not only reflected in labor cost and price, but also in areas including technology, complete equipment sets, integration of resources, project management, which have gained the Chinese contractors worldwide recognitions. Chinese contractors are active in developing countries due to the low level of technology and efficiency of engineering work locally available. The market share of the Chinese contractors in developing countries was approximately 22.0% in 2011, compared to less than approximately 2.0% in developed countries. Developed countries such as the US, Europe and Japan are well-developed in power, transportation and telecommunications infrastructure with sufficient technology and supplies.

## INDUSTRY OVERVIEW

### Competitive fronts

According to the Ipsos Report, the competitive fronts of our Company in the engineering contracting industry can be categorized as follows:

- **Brand recognition:** With over 30 years of experience in the market, our Company has built high brand awareness both in China and the international market. We ranked second among all Chinese contractors in terms of total accumulated revenue generated from international power projects from 2007 to 2011, out of which we ranked first in the same category for three consecutive years from 2007 to 2009. We also achieved many record breaking projects among Chinese contractors, especially in the power industry. Benefited from our early entrance in the international market, we have accumulated rich experience in international engineering contracting projects and attained strong reputation worldwide.
- **Pricing:** Similar to other Chinese Contractors who are benefited from the lower cost of labor and complete sets of plants and equipment, the price of projects offered by our Company is comparatively lower than that by the international contractors, which allows us to gain competitive advantage, particularly in developing countries.
- **Bargaining power:** A majority of the projects won by our Company is through tender negotiation in which relationship, rather than competitive pricing, is key to securing the project bids. Leveraging on our strong reputation and close relationship with government officials and extensive information sources including our overseas offices, consulates, foreign government agencies etc., we face relatively less competition in the market and have strong bargaining power which enables us to maintain our leading position.
- **Expertise and capacity:** We have one large-scaled comprehensive design and research institute, China Machinery R&D, at the state level which achieved Grade A design certificate whereas certain other PRC contractors engaged in international engineering contracting do not have their own design institute.

### INTERNATIONAL TRADING BUSINESS

The aggregate international trading value grew at a CAGR of approximately 10.9% from US\$12,674 billion in 2001 to US\$35,779 billion in 2011. The global import and export value experienced a major decline in 2009 by approximately 22.7% following the financial crisis and global recession. In 2010, the international trading value increased tremendously by approximately 21.4% in terms of growth rate, returning to the pre-financial crisis level in 2007. Such increase was also attributable to the rise in merchandise prices and demand in commodities due to the recovery of the global economy. The following chart shows the international trading value for the global market for the periods specified.

International Trading Value for Global Market from 2001 to 2011



## INDUSTRY OVERVIEW

Note:

(1) International trading value refers to the import and export value of merchandise trade.

Source: World Trade Statistics 2011

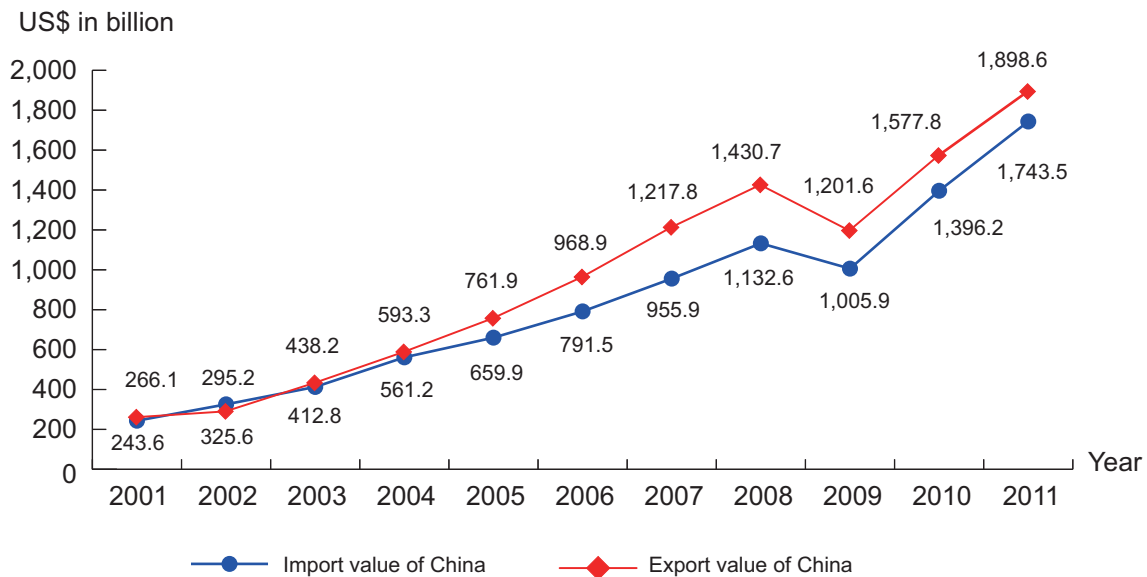
### China's International Trading

China ranked first in export value and second in import value in the world in 2010. China's international trade value expanded tremendously from 2001 to 2011.

Import value of China grew at a CAGR of approximately 21.8% while export value grew at a CAGR of approximately 21.7% from 2001 to 2011. With China's accession to the World Trade Organization in December 2001, China has committed itself to additional reforms. Sustained implementation of these commitments further deepened China's internationalization. China experienced substantial decline in import and export values in 2009 by approximately 11.2% and 16.0%, respectively, due to the global financial crisis. The fall was a first in the 11 consecutive years and the biggest drop since 1978, when the country embarked on its reform and opening up.

Export value of China in 2010 returned to its pre-financial crisis level. Despite the recent rise in labor costs, exports from China have remained competitive with limited export price increase and limited gains in market share. China still faces deteriorating trade conditions with increasing trade protection measures from other countries, especially from the developed countries, and economic instabilities during the global recovery. With its competitive advantages in international trade, China will remain a major target for trade protectionism from other countries as its trade continues to grow. The following chart shows the import and export value of China in respect of global trading for the periods specified.

**Import and Export Value of China to Global Trading from 2001 to 2011**



Source: China statistics yearbook 2011; Ipsos Report

In 2011, there were two main types of products being traded by China, namely machinery and mechanical equipment and electrical equipment. From 2001 to 2011, the trading volume of machinery and mechanical equipment grew at a CAGR of approximately 19.3% and 33.3% in import and export value, respectively, while that for electrical equipment grown at approximately 16.2% and 17.5%, respectively.

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## INDUSTRY OVERVIEW

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### **Trend of International Trade for Equipment**

The total value of worldwide trade for machinery and transport equipment resumed its growing momentum from the financial crisis, with a growth rate of approximately 26.0% in 2010, compared to approximately -32% in 2009. The recovery of global economy drove the increasing needs for the import of machinery and transport equipment, especially to the developing countries, such as those in Africa, Latin America and the Middle East, which did not have mature technology for domestic production. These regions relied on imported equipment for the completion of infrastructure and construction projects. As the nature of the production and construction and engineering changed from being labor-intensive to automated, the demand for machinery and transport equipment will be sustained by consistent quality output and on-time completion.

### **Method of Trading and Financing**

International trading methods generally include normal trade and processing trade, which shared approximately 36.0% and 64.0%, respectively, of international trading in 2011. Normal trade refers to the business activity of importing finished products from abroad and exporting without further processing, while processing trade refers to importing all or part of the raw materials, parts and components, accessories, and packaging materials from abroad, and re-exporting the finished products after processing or assembly by enterprises within the country of import. Owing to globalization, processing trade tends to be a common practice of international trade because of the share of resources and the gaining of benefits from low labor cost. Normal trade can be transactions between importers and exporters, or involving agencies in between. The demand in the destination markets and the cost of trading are important criteria of the method of international trade. Tariff is used by many countries to protect domestic industries and a key consideration for importers and exporters to do international trade business.

Documentary credit and trade credit insurance are the most common international trade financing in the world. Several methods of international trade financing, including documentary credit, documentary collection, trade credit insurance, export factoring, forfeiting etc., are adopted to reduce transactional risk. Typically, commercial banks or financial institutions and export credit agencies support the work of international trade financing.

### **Competitive Landscape**

Germany, the US and China have been in neck-to-neck competition being the world's largest traders. In particular, China's rise as a major global economy was boosted by its accession to the World Trade Organization in 2001, which drove the reform and opening up of its economy. The integration of China with the global economy over the years, coupled with its low labor cost and currency value has given Chinese business an edge in competition against other developed countries, and improved the ranking of China from the seventh largest exporter in 2000, to the largest since 2008, surpassing the US and Germany. After the financial crisis in late 2008, China became the largest exporter and second largest importer by international trade value, which was approximately 10.4% and 9.5% of the total world export and import, respectively, in 2011. Machinery and electrical equipment was the biggest category of the international trade in China, which was approximately US\$2,295.8 billion and shared approximately 63.0% of the total international trade value of China in 2011.

On the other hand, most countries such as the US, China, and Germany had smaller trade imbalances after the financial crisis than before. The trade deficit of the US in 2011 was approximately 11.0% less than the respective trade deficit in 2008, while the trade surplus of China was approximately 48.0% less than the trade surplus of 2008. The surplus of Germany in 2011 was

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## INDUSTRY OVERVIEW

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approximately 16.0% less than the surplus of 2008. Factors affecting the international trade (import and export) after the financial crisis include the following:

- **The global economy.** Import demand determined the value and volume of international trade. The global GDP growth rate decreased from approximately 1.5% in 2008, through approximately -2.3% in 2009, and then increased to approximately 4.1% in 2010 and 2.7% in 2011; while the world international trade value growth rate went from approximately 15.3% in 2008, through approximately -22.9% in 2009, and to approximately 21.6% in 2010 and 19.5% in 2011.
- **The exchange rate.** The appreciation of a currency might hinder export and stimulate import of the corresponding region, while the depreciation of a currency might stimulate the export of the corresponding region. The real effective exchange rate of RMB against a broad basket of currencies rose at approximately 2.7% in 2011, while the real effective depreciation of US dollar against trading partner's currencies was at approximately -4.9% across the same period.
- **The prices of raw materials and labor wage.** Inflation, increases in investment activities, and rising minimum wages contributed to the increase in demand for raw materials and cost of labor.

### SOURCES OF INFORMATION

In connection with the Global Offering, we have engaged Ipsos Hong Kong Limited, an independent third party, to conduct a study of the global infrastructure engineering industry and international trading industry in general, and the infrastructure engineering industry and international trading industry in developing countries in particular. Ipsos Hong Kong Limited (formerly known as Synovate Ltd.) is part of Ipsos SA and it conducts research on market profiles, market size, share and segmentation analyses, distribution and value analyses, competitor tracking and corporate intelligence. Established in 1975, Ipsos SA is a market research and consulting company which employs approximately 16,000 personnel worldwide in over 84 countries and listed on the NYSE Euronext Paris in 1999. We included certain information from the Ipsos Report in this Prospectus because we believe such information facilitates an understanding of the infrastructure engineering and international trading market for potential investors. The Ipsos Report was prepared based on (i) desk research of specialized industry literature, government and regulatory sources, online data sources, third-party reports and surveys, industry reports and analyst reports, industry associations and the database maintained by Ipsos Hong Kong Limited, and (ii) primary research through in-depth interviews with key international engineering contractors, industry association and experts. In particular, to the extent available, the Ipsos Report cited data and statistics from sources including government and regulatory bodies and other international organizations such as the Department of Agricultural of the United States, International Monetary Fund and World Bank, which are generally accepted as reliable sources available in the market and commonly adopted by industry researches. The data and statistics derived from independent publications issued by Economic Research Service, International Monetary Fund and International Telecommunications Union are not commissioned by our Company or any of our connected persons. In addition, the following parameters were considered in the market sizing estimation model adopted in the Ipsos Report: (i) government and private investment in infrastructure globally and in developing countries; (ii) revenues of the leading contractors of infrastructure engineering and their share in the power, transportation and telecommunications sectors respectively; and (iii) revenues of the leading contractors of infrastructure engineering and their share in key markets in the world. We have agreed to pay a total of approximately HK\$452,034 in fees for the preparation of the Ipsos Report.