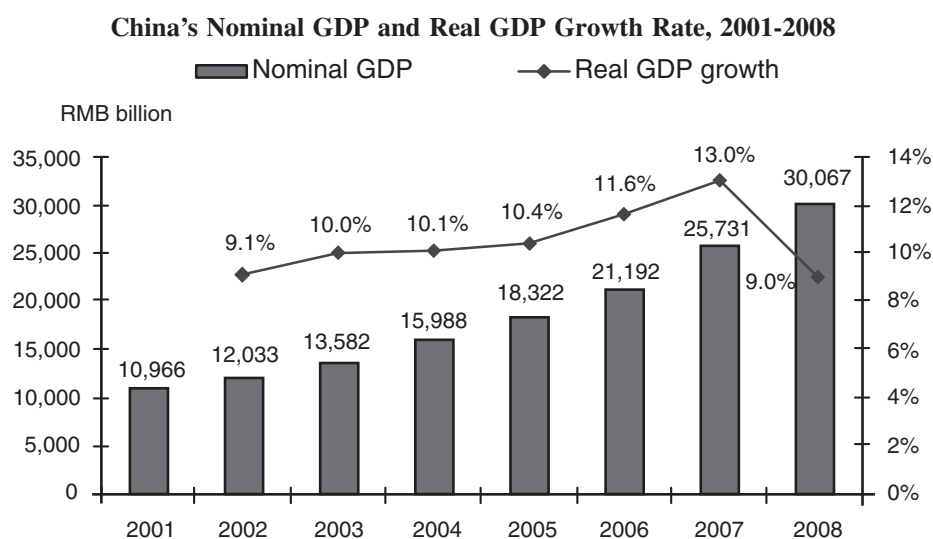


## INDUSTRY OVERVIEW

*This section contains certain information which has been derived from official and other public sources. Although we have reproduced the data and statistics extracted from such official and other public sources in a reasonably cautious manner, neither we, our affiliates or advisors have independently verified the information directly or indirectly derived from these sources, and such information may not be consistent with other information compiled in or outside of China. We make no representation as to the completeness, accuracy or fairness of such information and accordingly such information should not be unduly relied upon.*

### OVERVIEW

China has achieved significant economic growth in the last three decades. Its GDP has grown rapidly since the PRC Government introduced economic reforms and “open-door” policies in 1978. After China’s accession to the WTO in 2001, China’s economy has entered a new phase of growth and its GDP has grown continuously. In 2008, according to the World Bank, China became the world’s third largest economy. China’s real GDP recorded a CAGR of 10.5% from 2001 to 2008, according to the PRC National Bureau of Statistics. The following chart shows China’s GDP and its growth rate for the periods indicated.



Sources: China Statistics Yearbook (2008); Statistical Communique of the PRC on the 2008 National Economic and Social Development

China’s economic development directly affects the demand for our products and services and therefore our business. The key factors affecting China’s economic development include:

- urbanization and industrialization; and
- growth in fixed asset investments.

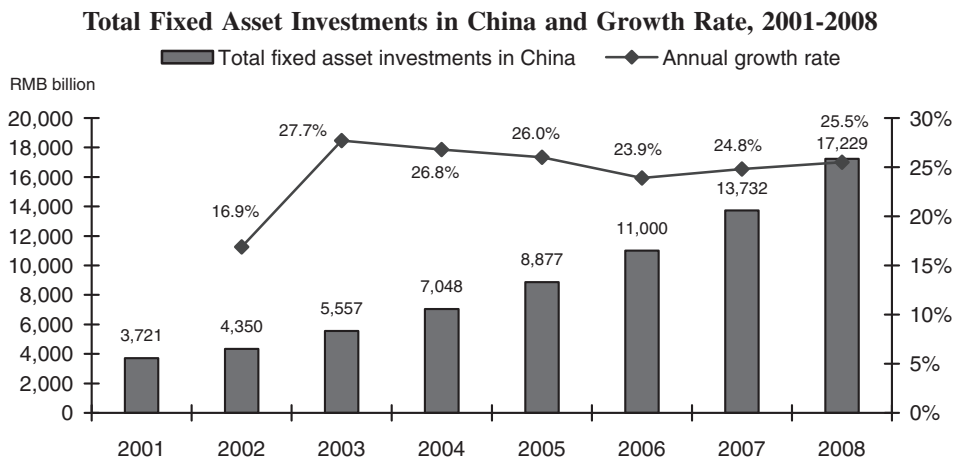
### Urbanization and Industrialization

As China’s economy grew significantly, China has experienced further increases in urbanization and industrialization. According to the PRC National Bureau of Statistics, China’s urbanization rate (i.e., percentage of urban population in the total population) increased from 37.7% in 2001 to 45.7% in 2008. During the same period, China’s industrialization rate (i.e., percentage of total GDP attributable to industrial activities) increased from 45.1% to 48.6%.

## INDUSTRY OVERVIEW

### Growth in Fixed Asset Investments

China’s accelerated urbanization and industrialization has led to significant increases in fixed asset investments. According to the PRC National Bureau of Statistics, total fixed asset investments in China grew at a CAGR of 24.5% from 2001 to 2008. The following chart shows the total fixed asset investments in China and their growth rate for the periods indicated.

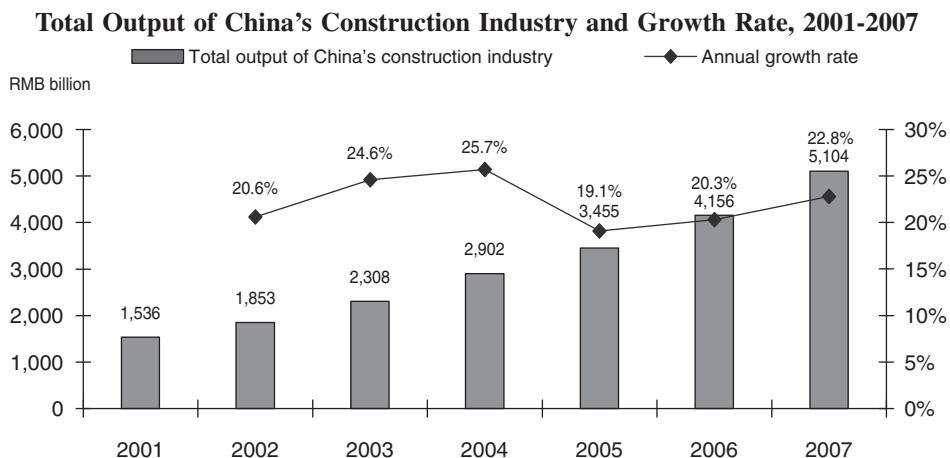


Sources: China Statistics Yearbook (2008); Statistical Communique of the PRC on the 2008 National Economic and Social Development

### ENGINEERING AND CONSTRUCTION INDUSTRY

#### Development of the Construction Industry

Driven by the increases in urbanization and industrialization and the growth in fixed asset investments, China’s construction industry has experienced continuous growth in recent years. The following chart shows the total output of China’s construction industry and its growth rate for the periods indicated.



Source: China Statistics Yearbook (2008)

The construction industry primarily involves engineering and construction services for building construction, civil and public projects, highway construction, railway construction and hydraulic engineering projects. It can also be categorized into various specialized contracting areas, including cement engineering and

## INDUSTRY OVERVIEW

construction, metallurgical engineering and construction, and petrochemical engineering and construction. Driven by the growth in fixed asset investments and the rapid development of the construction industry, the engineering and construction contract services sector in China has continued to grow in recent years.

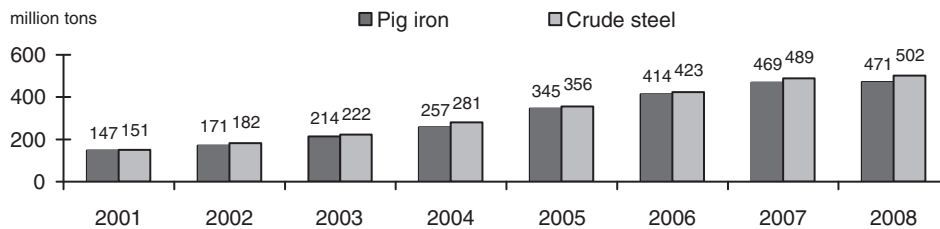
### Metallurgical Engineering and Construction

Metallurgical engineering and construction refers to the planning, surveying, consulting, design, construction, installation, testing, supervision and monitoring involved during the course of a metallurgical engineering and construction project. Metallurgical engineering and construction in China includes iron and steel metallurgical engineering and construction and non-ferrous metallurgical engineering and construction.

#### *Iron and steel metallurgical engineering and construction*

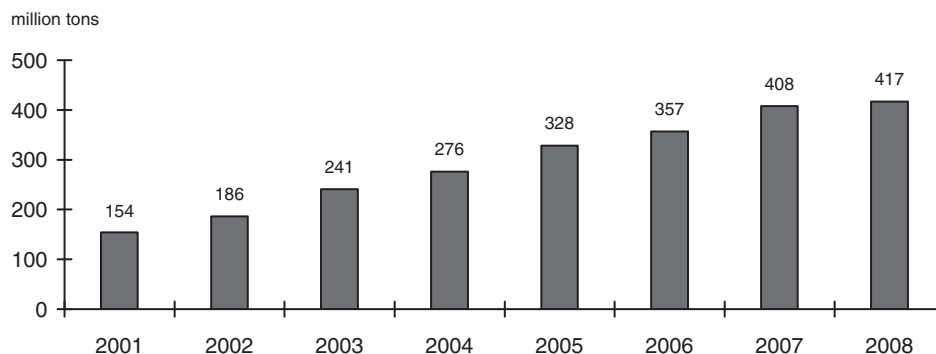
Rapid economic growth in China has led to an increase in demand for iron and steel in recent years. This has promoted the rapid development of China’s iron and steel industry, evidenced by a rapid growth in the output and consumption of pig iron and crude steel. The following charts show China’s output of pig iron and crude steel and the consumption of steel, respectively, for the periods indicated.

**China’s Annual Outputs of Pig Iron and Crude Steel, 2001-2008**



Source: World Steel Association

**China’s Apparent Consumption of Steel, 2001-2008**



Source: AME Mineral Economics

According to the World Steel Association, China’s annual steel output ranked first in the world each year from 1996 to 2008. In 2008, China’s crude steel output was 502 million tons, which represented 37.8% of the total crude steel output of the world. The technological upgrades and maintenance of existing production capacities and the addition of new production capacities in China have fueled the steady growth of investments in the iron and steel industry in China. China is also the world’s largest consumer of steel. In 2008, China’s apparent consumption of

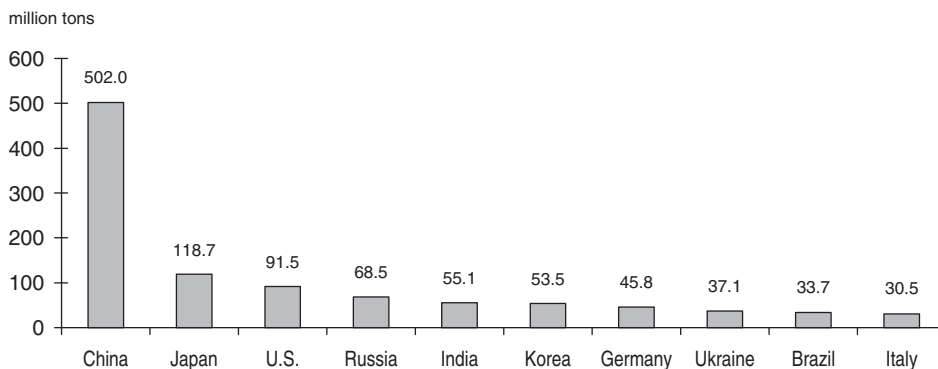
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## INDUSTRY OVERVIEW

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steel was 417 million tons, representing 34.8% of the total apparent consumption worldwide. The following chart shows the steel output of the top 10 steel-producing countries in the world in 2008.

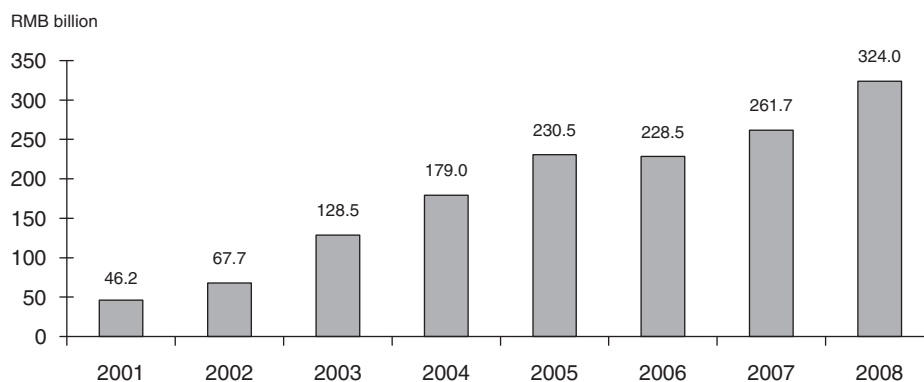
**Crude Steel Output of the Top 10 Steel-Producing Countries in the World in 2008**



Source: World Steel Association

The rapid growth of China’s iron and steel industry has led to steady growth in investments in that industry, presenting significant development opportunities for the iron and steel metallurgical engineering and construction industry. In 2008, total fixed asset investments in the ferrous metallurgy and rolling processing industry in China amounted to RMB324.0 billion, which represented a more than six-fold increase as compared to 2001. The following chart shows total fixed asset investments in the ferrous metallurgy and rolling processing industry in China for the periods indicated.

**Total Fixed Asset Investments<sup>(1)</sup> in China’s Ferrous Metallurgy and Rolling Processing Industry, 2001-2008**



Sources: China Statistics Yearbook (2002-2008); Statistical Communique of the PRC on the 2008 National Economic and Social Development

(1) Due to changes in statistical measures in China Statistics Yearbook since 2004, the 2001-2003 data covers the entire country while the 2004-2008 data covers urban areas only.

### ***The PRC Government’s iron and steel industry development policy and invigoration plan***

While China’s iron and steel output has grown continuously, China’s iron and steel industry is facing a time of strategic transformation. The needs of China’s economic growth can no longer be met by an underdeveloped iron

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## INDUSTRY OVERVIEW

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and steel industry that is highly fragmented, has a low proportion of high value-added and technically advanced products, and operates on a highly energy consuming, low efficiency and unsophisticated model.

In 2005, China promulgated the Policy on the Development of the Iron and Steel Industry (the “Policy”). According to the Policy, the goals for the future development of China’s iron and steel industry would consist of enhancing the industry’s overall technical capabilities, promoting its structural change, improving its geographic distribution, developing an economy that promotes recycling, reducing materials and energy consumption, emphasizing environmental protection, enhancing the overall competitiveness of enterprises, upgrading the industry, and developing the industry into an internationally competitive one that will meet the basic needs of national economic and social development in terms of product quantity, quality and variety.

Since the second half of 2008, the ramifications of the global financial crisis have materially impacted the iron and steel industry in China, resulting in significant decreases in demand and prices, difficulties in operations among enterprises and losses incurred across the industry. The iron and steel industry has faced unprecedented challenges in maintaining its steady development. In January 2009, the State Council approved the Plan on the Overhaul and Invigoration of the Iron and Steel Industry (the “Plan”), which aims to speed up the phasing out of obsolete capacity in China’s iron and steel industry, avoid unhealthy competition within the industry, and promote the positive development of the industry. Based on the Policy, the Plan further emphasizes the acceleration of the overhaul and invigoration of China’s iron and steel industry and the need to strengthen the industry by controlling total capacity, phasing out obsolete capacity, jointly implementing restructurings, upgrading technologies, and optimizing the geographical distribution of the industry. The key contents of the Plan include:

### *A. Stringent control over iron and steel production and speeding up of obsolete capacity elimination*

There will be a stringent control over the addition of new production capacity. No iron and steel project that merely aims to add and expand production capacity will be approved and supported by the PRC Government. The elimination of obsolete capacity must be a prerequisite of all projects. By the end of 2010, China expects to phase out 53.4 million tons of capacity of blast furnaces of 300 m<sup>3</sup> or below and 3.2 million tons of capacity of converter furnaces and electric furnaces with capacity of 20 tons or below. By the end of 2011, China expects to phase out blast furnaces of 400 m<sup>3</sup> or below and converter furnaces and electric furnaces of 30 tons or below, thus eliminating 72.0 million tons of obsolete iron production capacity and 25.0 million tons of obsolete steel production capacity. For regions in which the phasing-out policy is implemented and large iron and steel plants are constructed, as well as in other regions meeting specified conditions, the standard of phasing out obsolete capacity must be elevated to cover blast furnaces of 1,000 m<sup>3</sup> or below and corresponding steel production capacity.

### *B. Promoting corporate restructuring and increasing industry concentration*

Large-scale enterprises such as Baosteel, Anbensteel and Wusteel will be further leveraged, so as to promote the completion of substantial restructurings of Anbensteel, Guangdong Steel Group, Guangxi Steel Group, Hebei Steel Group and Shandong Steel Group to achieve the unified management of production, supply and distribution as well as personnel and assets within their respective groups; facilitate cross-region reorganizations among Anbensteel, Pansteel and Dongbei Special Steel (東北特鋼), and among Baosteel, Btsteel and Ningbo Iron & Steel (寧波鋼鐵); and facilitate intra-region reorganizations among Tianjin Pipe (天津鋼管), Tiantie (天鐵), Tiansteel and Tianjin Metallurgical Company (天津冶金公司) and among Taiyuan Iron & Steel (太鋼) and iron and steel enterprises within its province. By 2011, China aims to establish several large-scale iron and steel enterprises with production capacity of over 50 million tons and possessing strong international competitiveness, such as Baosteel, Anbensteel and Wusteel, and several large-scale iron and steel enterprises with production capacity of 10 million to 30 million tons.

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## INDUSTRY OVERVIEW

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### *C. Enhancing efforts to upgrade technologies and promote technological advancement*

Key support will be provided for implementing specific projects for technology upgrades and advancement of China’s iron and steel industry, promoting the use of reinforced steel bars and resource-saving technology, developing an economy that promotes recycling, advancing energy saving and emissions reduction technology such as high-temperature and high-pressure coke dry quenching, residual heat recovery and flue gas desulfurization, and enhancing the technologies that utilize low-grade iron ores that are difficult to smelt.

### *D. Optimization of geographical distribution of the iron and steel industry and coordination of overall industry development*

The adjustment of geographical distribution of China’s iron and steel industry will be accelerated under the premise of reducing or at most maintaining the existing production capacity. First, the construction of coastal iron and steel bases shall be commenced by facilitating the construction of superior iron and steel bases such as Caofeidian, Zhanjiang Port, Fangcheng Port, Rizhao Port and Ningbo Port in a timely manner. Second, the relocation of urban steel plants will be facilitated in order to reduce urban pollution. Third, the construction of iron and steel projects specified in the Special Plan on Post-Wenchuan Earthquake Reconstruction Productivity Distribution and Industrial Adjustment (《汶川地震災後重建生產力布局和產業調整專項規劃》) shall be duly implemented in order to support the economy of the earthquake-affected region.

### *E. Adjusting the steel product structure and enhancing product quality*

Steel for high-speed railways, high-strength steel for automobiles, high-end steel for electric power, tool and die steel, special large forgings and other key types of steel will be further developed. Qualified enterprises and research entities will be given support to develop technology such as extra-thick steel plates and high-pressure boiler tubes for million kWh thermal power and nuclear power and high magnetic induction and low iron loss oriented silicon steel for transformers of 250,000 kVA above. Through enhancing accreditation standards and policy guidance, steel quality will be raised up to the highest international standards. Adjustments to relevant design regulations will be made with a view to phase out hot-rolling steel bars of 335MPa or below. The use of steel bars of 400MPa or above will be further promoted for upgrading and advancement of construction steel.

Meanwhile, various policies and measures will be introduced in China to ensure the implementation of the Plan, which include increased investment in technology advancement and upgrades, optimizing the phasing-out mechanism for obsolete production capacities, improving corporate reorganization policies, enhancing the standard on the use of steel in construction projects and improving and revising, as appropriate, the Policy.

These measures under the Plan show the determination of the PRC Government to promote the transformation and upgrading of China’s iron and steel industry, in addition to directing the future development of the iron and steel metallurgical construction industry in the PRC. Under the macro-control policy, China’s total iron and steel production is expected to stabilize gradually. The adjustment in the geographic distribution of the iron and steel industry, the upgrading of technologies and products, the renovation and expansion of large enterprises, the adoption of energy-saving and emissions reduction and other new technologies, and the elimination of obsolete production capacity are expected to fuel the demand for large-scale investments in the industry and engineering and construction projects, presenting new development opportunities for China’s metallurgical engineering and construction industry. On the other hand, the adjustment in the industry’s product structure also poses challenges to China’s metallurgical engineering and construction industry. Those metallurgical engineering and construction enterprises that are weak in research and development and apply obsolete technologies may be eliminated under these governmental policies while those that have core technologies, equipment manufacturing capabilities,

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## INDUSTRY OVERVIEW

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research and development and rapid industrialization capabilities, and large established customer bases are expected to benefit from such policies.

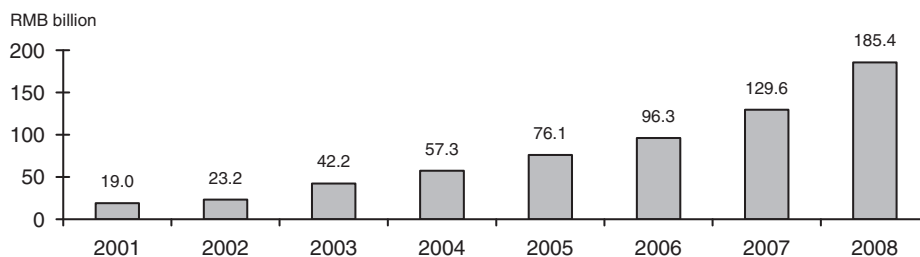
In the first quarter of 2009, China’s iron and steel industry began increasing production as a direct result of the central government’s stimulus plan. In April 2009, the Ministry of Industry and Information Technology issued the Urgent Circular on the Control of Excessive Increase of the Iron and Steel Output (the “Circular”) to emphasize the implementation of the Plan. The Circular points out a number of issues faced by China’s iron and steel industry, including the decline in iron and steel exports, decreased product prices and the losses suffered by a significant number of iron and steel enterprises in the first quarter of 2009 and provides further guidelines for the iron and steel industry to control the growth of production capacity, especially in respect of obsolete facilities, reduce iron imports and improve the cost structure of iron and steel companies by focusing on implementing effective technologies and corporate management.

### *Non-ferrous metallurgical engineering and construction*

In recent years, through domestic research and development as well as the assimilation of foreign advanced technologies, China has made significant advancement in developing non-ferrous metallurgical technology and equipment as well as in domestically producing key non-ferrous metallurgical equipment and materials.

The non-ferrous metals industry is expected to evolve toward resources consolidation and production chain integration. This will be primarily evidenced by the enhancement in the technological capabilities and expansion of competitive enterprises, the improvement in the structure of mining enterprises, and enhancements in the development and utilization of mineral resources, all of which will promote the development of the non-ferrous metallurgy sector. The following chart shows China’s fixed asset investments in the non-ferrous metallurgy and rolling processing industry for the periods indicated.

**Total Fixed Asset Investments<sup>(1)</sup> in China’s Non-ferrous Metallurgy and Rolling Processing Industry, 2001-2008**



Sources: China Statistics Yearbook (2008); Statistical Communique of the PRC on the 2008 National Economic and Social Development

(1) Due to changes in statistical measures in China Statistics Yearbook since 2004, the 2001-2003 data covers the entire country while the 2004-2008 data covers urban areas only.

In February 2009, the State Council approved in principle a plan for the overhaul and invigoration of China’s non-ferrous metal industry, which aims to promote the restructuring, enhancement and upgrading of the industry by focusing on the control of total capacity, phasing out of obsolete capacity, technology upgrades and reorganization of enterprises. This plan sets forth in more detail the aims to stabilize and grow the domestic market; change the product structure to meet the needs of the power, transportation, construction, machinery, light and other industries; support the export of high value-added processed products involving advanced technology; implement strict control over the total capacity and accelerate the phasing out of obsolete capacity; enhance the efforts in technology upgrades and research to promote technological advancement; develop widely used advanced technologies and

## INDUSTRY OVERVIEW

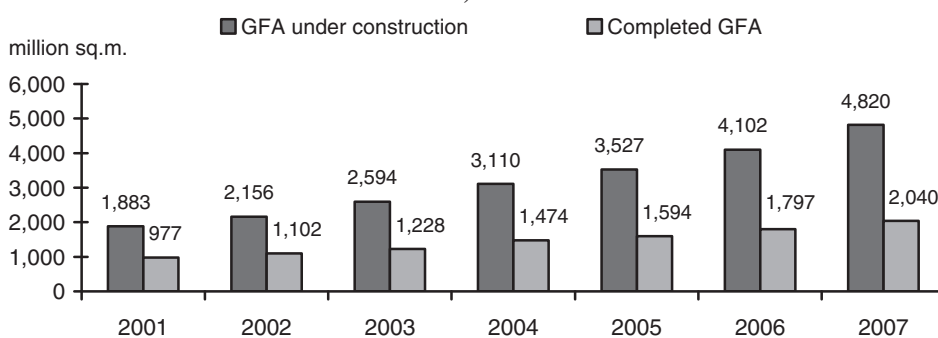
enhance the level of equipment processes and key materials processing capability; promote reorganization of enterprises, improve the geographic distribution of the industry, strengthen corporate management and safety control, and enhance the competitiveness of the industry; fully utilize domestic and overseas resources and enhance the capacity to protect resources; and accelerate the construction of a non-ferrous metal recycling system covering the entire society, develop economic recycling and enhance the efficiency of resources utilization. The introduction of this plan is expected to promote the development of China’s non-ferrous metals industry.

### Non-metallurgical Engineering and Construction

#### *Building construction*

The development of the building construction sector is closely related to China’s overall economic growth, industrialization, urbanization and the development of China’s property industry. In recent years, the promotion of urbanization, the construction of new rural villages and the implementation of the PRC Government’s strategy to develop the western regions of China, among other factors, have promoted the development of building construction industry. The following chart shows the total GFA under construction and the total GFA completed by construction enterprises in China for the periods indicated.

**Total GFA Under Construction and Total GFA Completed by Construction Enterprises in China, 2001-2007**



Source: China Statistics Yearbook (2008)

#### *Transportation infrastructure construction*

As a key component of fixed asset investments, total investments in transportation infrastructure in China have continued to grow in recent years. During the first three years of the Eleventh Five-Year Plan period, the total investment on highway and waterway transportation infrastructure was RMB2.2 trillion, which exceeded that of the Tenth Five-Year Plan period, representing 75% of the total planned investment for the Eleventh Five-Year Plan period.

Since the second half of 2008, China’s economic growth has slowed down primarily as a result of the impact of the global financial crisis and economic downturn. In November 2008, the State Council introduced ten measures to stimulate domestic demand and promote economic growth. Among these is a measure to “accelerate the construction of railways, highways, airports and other major infrastructure, with focuses on construction of certain dedicated passenger railways, coal railways and rail networks in Western China, the completion of the expressway networks, the arrangement of construction of airport hubs in Central and Western China and feeder airports, and the speeding up of the improvement of urban power grids.” The introduction of this policy is expected to further promote the development of China’s transportation infrastructure construction industry.



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## INDUSTRY OVERVIEW

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### *Highway construction*

Highway construction is a key area of development of China’s transportation infrastructure. Under the Development Plan on Highway and Waterway Transportation during the Eleventh Five-Year Plan period issued by the Ministry of Transport, by the end of the Eleventh Five-Year Plan period (2010), the total length of China’s highways is targeted to reach 2.3 million kilometers, of which the total length of China’s expressways is expected to reach 65,000 kilometers. The annual highway capacity is targeted to reach 24 billion passenger-times and 16 billion tons of goods, representing CAGRs of 7.1% and 3.6%, respectively.

According to the National Expressway Network Plan (《國家高速公路網規劃》) promulgated by the Ministry of Transport in 2005, the total length of China’s expressways is expected to reach 100,000 kilometers and the national expressway network is expected to be substantially completed by 2020. The total investment required to complete the plan is estimated to be RMB2.2 trillion.

### *Urban rail transit construction*

Urban rail transit, known as the “aorta of urban transportation,” is a key component of the urban public transportation system. Since Phase I of Beijing Subway was completed in October 1969 and commenced trial operations in January 1971, urban rail transit has been developing in China for about four decades. Major cities in China, including Beijing, Shanghai and Shenzhen, have already established urban rail transit systems. The PRC Government has in recent years approved construction of urban rail transit systems in Qingdao, Hangzhou, Chengdu and Shenyang, for which the construction will commence or has commenced.

Compared to other forms of transportation, urban rail transit can avoid traffic jam and utilize spaces efficiently, provides greater capacity, is faster and causes less pollution. With the acceleration of China’s urbanization and growing urban population, demand for urban rail transit is expected to grow significantly.

### *Airport construction*

According to the Eleventh Five-Year Plan for China’s Civil Aviation Development (《中國民用航空發展第十一個五年規劃》), the number of civilian airports in China is expected to reach approximately 190 by 2010, including three regional hub airports, eight large airports, 40 medium-sized airports and 140 small airports. During the Eleventh Five-Year Plan period, 37 airports will be renovated and expanded, 25 will expand certain terminals, nine will expand flight areas, and 40 new airports will be built. According to the National Civilian Airport Layout Planning, China is expected to have 244 civilian airports by 2020, 97 more than in 2006, forming northern, eastern, central-southern, southwestern and northwestern regional airport clusters. Based on preliminary estimates, a total investment of RMB450 billion will be required to complete these projects, including RMB140 billion required by the end of the Eleventh Five-Year Plan period.

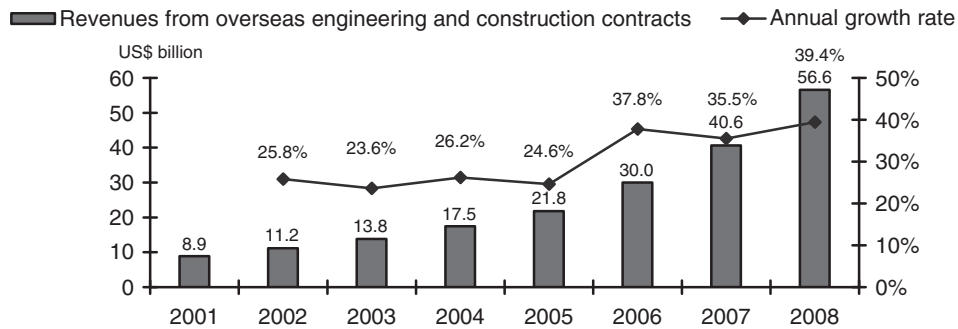
## **Overseas Engineering and Construction**

Overseas engineering and construction is a form of trade in services. In recent years, China’s overseas engineering and construction business has grown rapidly driven primarily by rapid globalization, China’s accession into the WTO and China’s rapid advancement in engineering and construction technology.

## INDUSTRY OVERVIEW

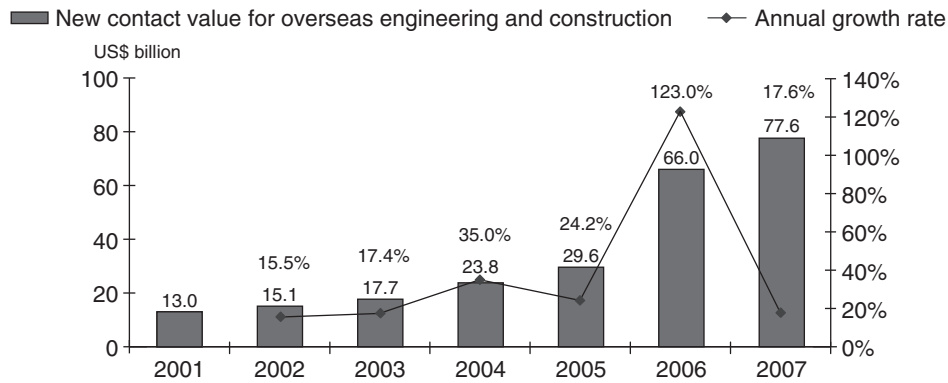
According to the National Bureau of Statistics, China generated US\$56.6 billion in revenues in 2008 from overseas engineering and construction works completed, representing an increase of approximately 536% from 2001. The total new contract value amounted to US\$77.6 billion in 2007, representing an increase of almost 500% from 2001. According to the National Bureau of Statistics, China’s accumulated revenue from completed overseas engineering and construction work and its accumulated overseas engineering and construction contracts value from 1976 to 2007 were US\$206.5 billion and US\$329.5 billion, respectively. The following charts show China’s revenues from overseas engineering and construction and new contract value, respectively, for the periods indicated.

**China’s Revenues from Overseas Engineering and Construction and Growth Rate, 2001-2008**



Sources: China Statistics Yearbook (2008); Statistical Communique of the PRC on the 2008 National Economic and Social Development

**China’s New Contract Value of Overseas Engineering and Construction and Growth Rate, 2001-2007**

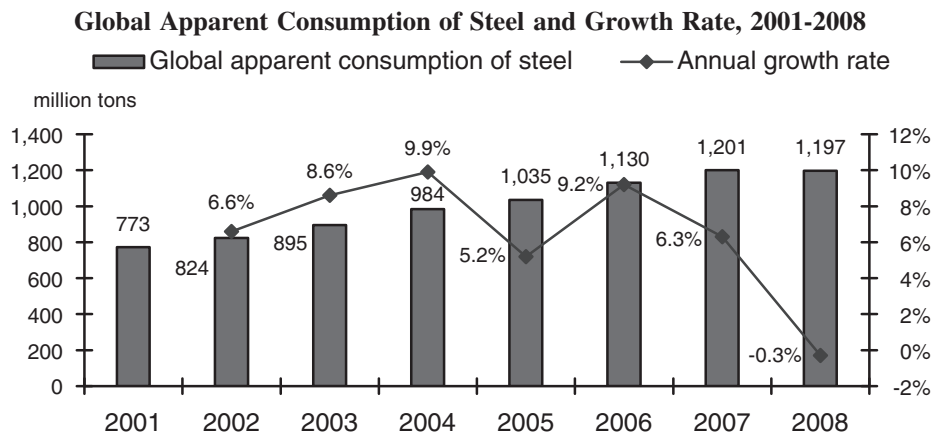


Source: China Statistics Yearbook (2008)

## INDUSTRY OVERVIEW

### *International metallurgical engineering and construction*

In general, the steady growth of the world economy in recent years has contributed to the demand for steel in many countries, especially in the emerging economies. From 2001 to 2007, the world consumption of steel grew rapidly. In 2007, the world apparent consumption of steel reached 1.2 billion tons, which represented an increase of 55% as compared to 2001. In 2008, mainly as a result of the global financial crisis and economic downturn, the world apparent consumption of steel recorded a slight 0.3% decrease as compared to 2007, which was the first decrease since 2001. The following chart shows the global apparent consumption of steel and its growth rate for the periods indicated.

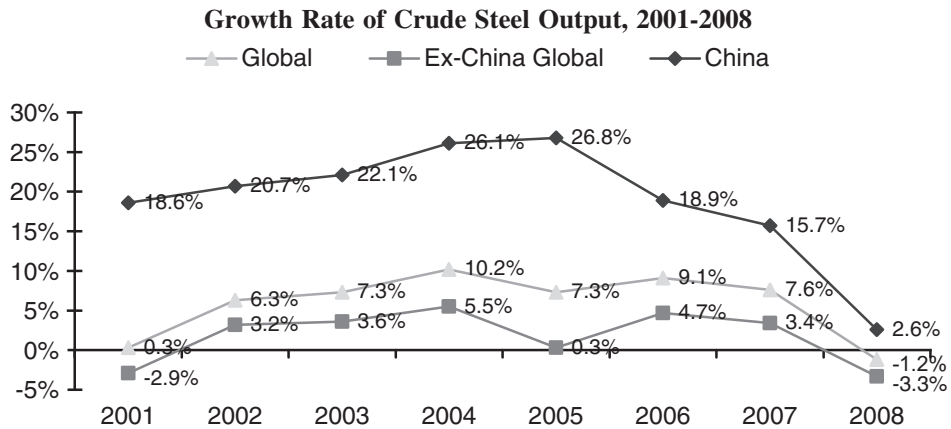


Source: AME Mineral Economics

The world's demand for steel has driven a steady growth in steel production in numerous countries. In particular, various emerging markets have experienced rapid growth in steel production. According to the World Steel Association, the world total crude steel output was 1,345 million tons in 2007, representing 7.6% growth over 2006, the fifth consecutive year of annual growth of over 7%. In 2007, the total crude steel output of 27 European countries was 210 million tons, representing 1.4% growth over 2006; in North America, it was 133 million tons and 0.7% growth; in Asia, 756 million tons and 11.8% growth; in the Commonwealth of Independent States, 124 million tons and 3.6% growth; and in South America, 48 million tons and 6.4% growth.

## INDUSTRY OVERVIEW

Since 2008, similar to the world consumption of steel, the world crude steel production recorded the first decrease in recent years primarily as a result of the impact of the global financial crisis. In 2008, world crude steel production was 1,330 million tons, representing a 1.2% decrease as compared to 2007. Although the growth in China’s crude steel production slowed down in 2008, it still maintained a 2.6% growth rate and reached 502 million tons. The following chart shows the growth rate of crude steel output in China and the rest of the world for the periods indicated.



Source: World Steel Association

## RESOURCES DEVELOPMENT INDUSTRY

The resources development industry primarily includes the exploration, mining, processing, smelting and further processing of metallic and nonmetallic mineral resources. Our resources development business primarily focuses on base metals, including iron ore, nickel, copper, zinc and lead.

### *Iron Ore*

Iron is primarily used to make steel. It is also used in the form of cast iron and forged iron. Iron and its compounds are also used to make magnets, pigments (ink, blueprinting paper and blush) and abrasives (rouge).

## INDUSTRY OVERVIEW

Iron ore resources are mainly concentrated in countries such as Russia, Australia, Ukraine, Brazil and China. According to the most recent Mineral Product Summary issued by the United States Geological Survey (the “USGS”), the world’s iron ore reserves as of December 31, 2008 amounted to 150 billion tons, which contained 73 billion tons of iron content. The iron ore reserve base was 350 billion tons, with 160 billion tons of iron content. The following table shows the iron reserves of major countries with iron resources as of December 31, 2008.

### Distribution of Iron Reserves by Country

Country	Iron Reserves <sup>(1)</sup>		Iron Reserve Base <sup>(2)</sup>	
	(billion tons)	(%)	(billion tons)	(%)
<i>Top five countries in reserves:</i>				
Russia . . . . .	14.0	19.2	31.0	19.4
Australia . . . . .	10.0	13.7	28.0	17.5
Ukraine . . . . .	9.0	12.3	20.0	12.5
Brazil . . . . .	8.9	12.2	17.0	10.6
China . . . . .	7.0	9.6	15.0	9.4
Other countries . . . . .	<u>24.1</u>	<u>33.0</u>	<u>49.0</u>	<u>30.6</u>
Total . . . . .	<u>73.0</u>	<u>100.0</u>	<u>160.0</u>	<u>100.0</u>

Source: USGS (January 2009)

- (1) As defined by USGS, the reserve data in the table above refers to the part of the reserve base which could be economically extracted or produced at the time of determination.
- (2) As defined by USGS, the reserve base data in the table above refers to the part of an identified resource that meets specified minimum physical and chemical criteria related to current mining and production practices, including those for grade, quality, thickness and depth.

Iron ore is the most important basic raw material used in the manufacture of steel. In recent years, as demand for iron and steel products has increased as a result of the development of the global economy, in particular the PRC economy, the demand for iron ore has grown steadily, which in turn has led to a continuous increase in the price of iron ore in the international markets. This has also stimulated, to a certain degree, the growth in the exploration and supply of iron ore. Recently, as a result of the weakened global economic conditions triggered by the financial crisis, demand for iron and steel has weakened, exerting to a certain extent downward pressure on the price of iron ore. The following table shows the production, consumption and price of iron ore globally between 2001 and 2008.

### Global Iron Ore Market

	2001	2002	2003	2004	2005	2006	2007	2008	CAGR
Production (million tons) . . . . .	1,056	1,113	1,219	1,356	1,548	1,815	1,990	2,211	11.1%
Consumption (million tons) . . . . .	1,052	1,109	1,213	1,355	1,548	1,815	1,990	2,211	11.2%
Ave annual nominal cash price (US\$/t) —									
Fines . . . . .	28.52	27.83	30.34	35.99	61.72	73.45	80.42	144.66	26.1%

Source: AME Mineral Economics

## INDUSTRY OVERVIEW

The significant growth of steel output in China has driven the continued growth in demand for iron ore. Investments in the mining of iron ore in China have also increased in recent years. According to AME Mineral Economics, China’s raw iron ore output has increased at a CAGR of 20.9% from 2001 to 2008. However, there remains a shortage of iron ore supply in China, and import of iron ore has steadily increased over this period. The following table shows China’s output and consumption between 2001 and 2008.

<b>China’s Iron Ore Market</b>									
	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>CAGR</u>
Production (million tons) . . . . .	218	231	261	310	426	588	683	824	20.9%
Consumption (million tons) . . . . .	311	343	409	518	701	914	1,066	1,268	22.2%

Source: AME Mineral Economics

### *Nickel*

Nickel is used primarily as an additive in making stainless steel, super heat-resistant alloys and various nickel-copper alloys. The super heat-resistant alloys and nickel-copper alloys are used in industrial applications that require resistance to corrosion and heat. Nickel is also used as the plating material for steel and plastics. As a result, nickel is broadly used in the food and beverage, medical and pharmaceutical, household products (such as kitchen cabinets), transportation and construction industries.

The world’s nickel resources are mainly located in Australia, New Caledonia, Russia, Cuba and Canada, among other countries. According to a recent Mineral Product Summary issued by the USGS, as of December 31, 2008, the world’s nickel reserves amounted to 70 million tons and the nickel reserve base was 150 million tons. The following table shows the nickel reserves of major countries with nickel resources as of December 31, 2008.

<u>Country</u>	<u>Nickel Reserves</u>		<u>Nickel Reserve Base</u>	
	(million tons)	(%)	(million tons)	(%)
China . . . . .	1.1	1.6	7.6	5.1
<i>Top five countries in reserves:</i>				
Australia . . . . .	26.0	37.1	29.0	19.3
New Caledonia . . . . .	7.1	10.1	15.0	10.0
Russia . . . . .	6.6	9.4	9.2	6.1
Cuba . . . . .	5.6	8.0	23.0	15.3
Canada . . . . .	4.9	7.0	15.0	10.0
<i>Other countries</i> . . . . .	<u>19.8</u>	<u>28.3</u>	<u>58.8</u>	<u>39.2</u>
<b>Total</b> . . . . .	<u>70.0</u>	<u>100.0</u>	<u>150.0</u>	<u>100.0</u>

Source: USGS (January 2009)

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## INDUSTRY OVERVIEW

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The global economic growth has fueled demand for stainless steel, resulting in a significant increase in demand for nickel, especially in China, Europe and Japan. Meanwhile, the supply of nickel sulfide is quite limited, resulting in a significant increase in the price of nickel in recent years. Faced with the steadily rising nickel price, nickel producers have resorted to mining nickel laterite with low mining values to increase output in recent years. Stainless steel producers also tended to use more substitutes of nickel. In addition, as a result of the downturn in the global economy, demand for stainless steel products has weakened, which has begun to exert downward pressure on the price of nickel. The following table shows the production, consumption and price of the refined nickel globally between 2001 and 2008.

### Global Refined Nickel Market

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>CAGR</u>
Production (thousand tons) . . . . .	1,164	1,187	1,216	1,254	1,284	1,367	1,459	1,387	2.5%
Consumption (thousand tons) . . . . .	1,106	1,177	1,221	1,248	1,261	1,396	1,328	1,274	2.0%
Average annual nominal cash price (US\$/t) . . . . .	5,948	6,712	9,640	13,852	14,733	24,287	37,184	21,104	19.8%

*Source:* AME Mineral Economics

According to AME Mineral Economics, China’s nickel output has grown rapidly in recent years in response to increasing domestic demand. The consumption of nickel has been growing rapidly and the demand has been partly met by imports. The following table shows China’s output and consumption of refined nickel between 2001 and 2008.

### China’s Refined Nickel Market

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>CAGR</u>
Production (thousand tons) . . . . .	53	57	67	77	96	152	222	207	21.5%
Consumption (thousand tons) . . . . .	83	94	125	150	189	255	330	357	23.2%

*Source:* AME Mineral Economics

### ***Copper***

Copper is highly thermal-conductive, chemically stable, tensile, weldable, cost-efficient to recycle, anti-corrosive, plastic and ductile. Pure copper can be made into fine brass wire and thin copper foil. Copper can form alloys with zinc, tin, lead, manganese, cobalt, nickel, aluminum and iron and is primarily used in electronics, light industry, machinery, construction and national defense.

## INDUSTRY OVERVIEW

Copper resources are mainly located in Chile, Peru, Mexico, Indonesia and the U.S. Among these countries, Chile has the most copper resources in the world, with 160 million tons of copper reserves, as of December 31, 2008, according to the USGS. As of December 31, 2008, the world’s copper ore reserves amounted to 550 million tons and the copper ore reserve base was 1 billion tons. The following table shows the copper reserves of major countries with copper resources as of December 31, 2008.

### Global Distribution of Copper Reserves by Country

<u>Country</u>	<u>Copper Reserves</u>		<u>Copper Reserve Base</u>	
	<u>(million tons)</u>	<u>(%)</u>	<u>(million tons)</u>	<u>(%)</u>
China . . . . .	30.0	5.5	63.0	6.3
<i>Top five countries in reserves:</i>				
Chile . . . . .	160.0	29.1	360.0	36.0
Peru . . . . .	60.0	10.9	120.0	12.0
Mexico . . . . .	38.0	6.9	40.0	4.0
Indonesia . . . . .	36.0	6.5	38.0	3.8
U.S. . . . .	35.0	6.4	70.0	7.0
Other countries . . . . .	<u>221.0</u>	<u>40.2</u>	<u>372.0</u>	<u>37.2</u>
Total . . . . .	<u>550.0</u>	<u>100.0</u>	<u>1,000.0</u>	<u>100.0</u>

Source: USGS (January 2009)

In recent years, the demand for copper has been growing due to the booming global economy. Meanwhile, the output growth of refined copper is quite limited, resulting in a significant increase in the price of copper in recent years. Faced with the rapidly rising copper price, substitutes of copper have been increasingly used. This, coupled with the weakened global economic conditions since 2008, has had a negative impact on the price of copper in 2009. The following table shows the production, consumption and price of refined copper globally between 2001 and 2008.

### Global Refined Copper Market

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>CAGR</u>
Production (thousand tons) . . . . .	15,287	15,037	15,273	15,928	16,571	17,296	17,944	18,125	2.5%
Consumption (thousand tons). . . . .	14,700	15,079	15,539	16,800	16,758	17,151	17,848	17,983	2.9%
Average annual nominal cash price (US\$/t) . . . . .	1,874	1,819	2,035	3,188	3,966	6,730	7,298	6,922	20.5%

Source: AME Mineral Economics



## INDUSTRY OVERVIEW

From 2001 to 2008, China’s consumption of copper grew at a CAGR of 11.0%, while the output growth of refined copper slightly outpaced the consumption growth at a CAGR of 14.0%. In recent years, China has relied on imports of refined copper to satisfy the demand in the domestic market. The following table shows China’s output and consumption of refined copper between 2001 and 2008.

<b>China’s Refined Copper Market</b>									
	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>CAGR</u>
Production (thousand tons) . .	1,513	1,608	1,831	2,222	2,544	3,003	3,491	3,791	14.0%
Consumption (thousand tons) . . . . .	2,357	2,775	3,097	3,381	3,652	3,604	4,562	4,900	11.0%

Source: AME Mineral Economics

### *Zinc*

Zinc is the third most commonly used non-ferrous metal, after copper and aluminum. Zinc is primarily used in the coating industry. Zinc can form alloys with many other non-ferrous metals, including zinc-aluminum alloys and zinc-copper alloys, which are widely used in casting. Composed of zinc, copper, tin and lead, brass is used in machinery manufacturing. Zinc plates containing small amounts of lead and cadmium can be made into cathodes of zinc-manganese dry batteries, printed zinc plates, powder-etched photoengraving printing plates and glue-based printing plates.

According to the USGS, as of December 31, 2008, global zinc reserves amounted to 180 million tons, with a reserve base of 480 million tons. Zinc reserves in Australia, China, Peru, the U.S. and Kazakhstan accounted for 67.2% of global reserves, and 70.8% of the global reserve base. The following table shows the zinc reserves of major countries with zinc resources as of December 31, 2008.

### Global Distribution of Zinc Ore Reserves by Countries

<u>Country</u>	<u>Zinc Reserves</u>		<u>Zinc Reserve Base</u>	
	(million tons)	(%)	(million tons)	(%)
<i>Top five countries in reserves:</i>				
Australia . . . . .	42	23.3	100	20.8
China . . . . .	33	18.3	92	19.2
Peru . . . . .	18	10.0	23	4.8
U.S. . . . .	14	7.8	90	18.8
Kazakhstan . . . . .	14	7.8	35	7.3
Other countries . . . . .	<u>59</u>	<u>32.8</u>	<u>140</u>	<u>29.2</u>
Total . . . . .	<u>180</u>	<u>100.0</u>	<u>480</u>	<u>100.0</u>

Source: USGS (January 2009)

## INDUSTRY OVERVIEW

Prior to 2003, there was a surplus in the global zinc market. However, due to the rapid growth of the consumption of iron and steel products in Asia, especially in China, and other emerging markets, demand for zinc-coated steel has grown significantly in recent years, resulting in a rapid increase in demand for zinc. Since 2003, the surplus in the zinc market has gradually turned into a shortage, driving up zinc prices in the international market in recent years. Meanwhile, due to the growth in demand for and price of zinc, zinc producers worldwide have increased their investments in zinc exploration and mining, and some new and expansion projects have already commenced production. Therefore, global zinc output continued to increase from 2001 to 2008, except for a slight decrease in output in 2005. However, since 2008, the supply of zinc has exceeded its demand, which, coupled with the impact of the economic downturn, led to a decrease in the price of zinc in 2008. The following table shows the production, consumption and price of refined zinc globally between 2001 and 2008.

<b>Global Refined Zinc Market</b>									
	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>CAGR</u>
Production (thousand tons) . . . . .	9,268	9,725	9,840	10,393	10,243	10,699	11,449	11,868	3.6%
Consumption (thousand tons) . . . . .	8,917	9,373	9,839	10,654	10,616	10,981	11,316	11,616	3.8%
Average annual nominal cash price (US\$/t) — Fines . . . .	886	778	829	1,047	1,389	3,272	3,250	1,868	11.2%

*Source:* AME Mineral Economics

China has rich zinc resources and has the second largest zinc ore reserves in the world. As one of the largest zinc producers in the world, China plays a critical role in the global zinc industry. The following table shows China’s output and consumption of refined zinc between 2001 and 2008.

<b>China’s Refined Zinc Market</b>									
	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>CAGR</u>
Production (thousand tons) . . . . .	2,038	2,155	2,319	2,720	2,776	3,163	3,743	3,927	9.8%
Consumption (thousand tons) . . . . .	1,500	1,750	2,155	2,690	3,041	3,115	3,597	3,919	14.7%

*Source:* AME Mineral Economics

### ***Lead***

Lead is mainly used to produce lead-based storage batteries. Lead alloys can be used for typecasts and soldering tins. Lead is also used in radiation or x-ray protective equipment.

## INDUSTRY OVERVIEW

Lead resources are mainly located in Australia, China, U.S., Kazakhstan and Peru. According to the USGS, as of December 31, 2008, the world’s lead reserves amounted to 79 million tons and the lead reserve base was 170 million tons. The following table shows the lead reserves of major countries with lead resources as of December 31, 2008.

### Global Distribution of Lead Reserves by Country

<u>Country</u>	<u>Lead Reserves</u>		<u>Lead Reserve Base</u>	
	<u>(million tons)</u>	<u>(%)</u>	<u>(million tons)</u>	<u>(%)</u>
<i>Top five countries in reserves:</i>				
Australia . . . . .	24.0	30.4	59.0	34.7
China . . . . .	11.0	13.9	36.0	21.2
U.S. . . . .	7.7	9.7	19.0	11.2
Kazakhstan . . . . .	5.0	6.3	7.0	4.1
Peru . . . . .	3.5	4.4	4.0	2.4
Other countries . . . . .	<u>27.8</u>	<u>35.2</u>	<u>45.0</u>	<u>26.5</u>
Total . . . . .	<u>79.0</u>	<u>100.0</u>	<u>170.0</u>	<u>100.0</u>

Source: USGS (January 2009)

Driven by Asia’s, in particular China’s, industrialization, especially the significant growth in automobile consumption, the demand for lead has grown significantly, resulting in an increase in the price of lead in the international market in recent years. Meanwhile, the growth in demand and the increase in price has prompted lead producers to further increase investments in exploration and mining of lead in recent years, and a number of new projects and expansion projects have already been completed and production has commenced, resulting in an increase in lead output. However, in 2008, the supply of lead has gradually exceeded its demand, which, coupled with the impact of the economic downturn, resulted in a decrease in the price of lead. The following table shows the production output, consumption and average price of refined lead globally between 2001 and 2008.

### Global Refined Lead Market

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>CAGR</u>
Production (thousand tons) . . . . .	6,028	6,125	6,787	6,999	7,637	7,925	8,135	8,730	5.4%
Consumption (thousand tons) . . . . .	6,840	6,635	6,844	7,296	7,801	8,062	8,147	8,582	3.3%
Average annual nominal cash price (US\$/t) — Fines . . . . .	476	452	516	888	976	1,287	2,596	2,075	23.4%

Source: AME Mineral Economics

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## INDUSTRY OVERVIEW

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Currently, China is the largest producer and consumer of lead in the world. The industrialization process in China has contributed to a significant increase in demand for lead in recent years. Furthermore, China has increased investments in lead smelting and mining in recent years, resulting in a significant increase in its lead smelting capacity. The following table shows China’s output and consumption of refined lead between 2001 and 2008.

<b>China’s Refined Lead Market</b>									
	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>CAGR</u>
Production (thousand tons) . .	1,172	1,325	1,564	1,934	2,391	2,715	2,788	3,149	15.2%
Consumption (thousand tons) . . . . .	700	965	1,183	1,510	1,973	2,213	2,573	3,052	23.4%

*Source:* AME Mineral Economics

### Major Characteristics of China’s Mineral Resources

#### *Large and Comprehensive Resource Base*

China is rich in minerals and has a large base of identified mineral resources and reserves. China’s mineral base includes a broad spectrum of key minerals including coal, iron, copper, aluminum, lead, molybdenum, titanium, tin and zinc.

#### *Low Per Capita Resources and Shortages in Certain Mineral Resources*

Although China is rich in mineral resources, China’s large population results in low per capita amounts of mineral resources. China has significant shortages in diamonds, platinum and chromium.

#### *Broad Range of Ore Quality*

China has both high-quality mineral ores and low-quality ores with complicated compositions. China’s high quality mineral resources include tungsten, tin, rare earth elements, molybdenum, antimony, talcum, magnesium and graphite. China’s resources of iron, manganese, aluminum, copper and phosphorus are often low-grade ores with complicated mineralogies that are difficult to process.

#### *Large Proportion of Identified Resources and Reserves with Low Geological Value*

Among China’s total identified resources and reserves, the proportion of reserves and reserve base is relatively low. The amount of economically mineable resources and reserves is also relatively low as compared to the amount of resources and reserves that have a low level of economic mineability or have undefined economic value. In addition, the amounts of indicated resources and reserves and inferred resources and reserves are relatively high as compared to the amount of measured resources and reserves.

#### *Good Prospects for Identifying Additional Mineral Resources Through Exploration*

China has significant potential for locating additional oil, natural gas, gold and copper resources. The underlying and surrounding areas of existing mines and the western regions of China have significant exploration potential.

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## INDUSTRY OVERVIEW

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### EQUIPMENT MANUFACTURING INDUSTRY

The equipment manufacturing industry supplies a variety of technical equipment to meet the needs of all areas of national economic development and national security. Equipment manufacturing products include machinery and electronics products. The equipment manufacturing industry is generally classified into seven major groups, namely, the metal products manufacturing industry, general equipment manufacturing industry, specialized equipment manufacturing industry, transportation equipment manufacturing industry, electric equipment and material manufacturing industry, electronics and communication equipment industry, and instrument-and-meter manufacturing and office machinery manufacturing industry. These seven groups are further classified into 185 sub-groups. The equipment manufacturing industry is a strategic industry for other areas of the national economy as well as for national defense and is an important indicator of a country’s overall economic strength and capabilities in science and technology.

The acceleration of China’s industrialization has led to the upgrading and invigoration of China’s equipment manufacturing industry, resulting in growing demand for products of the equipment manufacturing industry. Growth of domestic demand has also become the primary driving force behind the development of the equipment manufacturing industry. There are various infrastructure and other key projects aiming to support and further the national economic development. These show the need for China’s equipment manufacturing industry to provide major technical equipment with increased technological standards.

Our equipment manufacturing products primarily comprise specialized metallurgical equipment and steel structures.

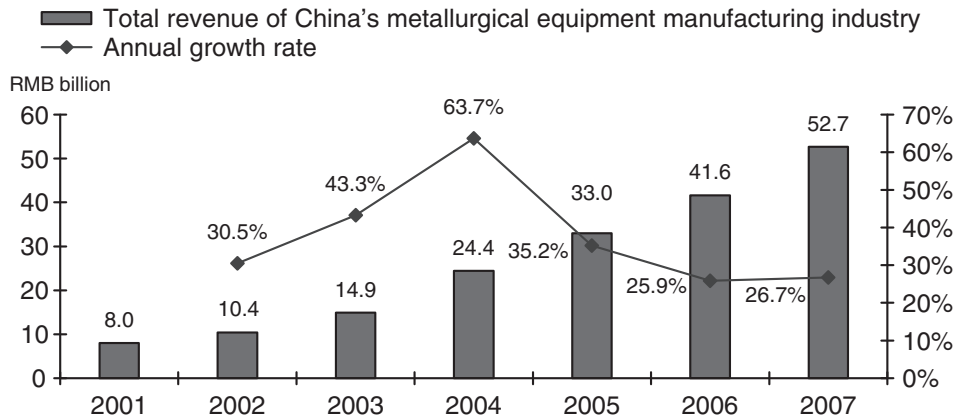
#### Specialized Metallurgical Equipment

Specialized metallurgical equipment refers to both specialized equipment for metal smelting, rolling and casting and integrated equipment sets, including pelletizing equipment, sintering equipment, coking equipment, iron smelting equipment, steel smelting equipment, metal rolling machinery, general metallurgical casting equipment and specialized metal equipment parts.

In recent years, with the rapid growth of China’s metallurgical industry, China’s demand for specialized metallurgical equipment has continued to grow, resulting in a steady increase in the output of specialized metallurgical equipment. The following chart shows the total revenue of China’s metallurgical equipment manufacturing industry and its growth rate for the periods indicated.

## INDUSTRY OVERVIEW

### Total Revenue of China’s Metallurgical Equipment Manufacturing Industry and Growth Rate, 2001-2007



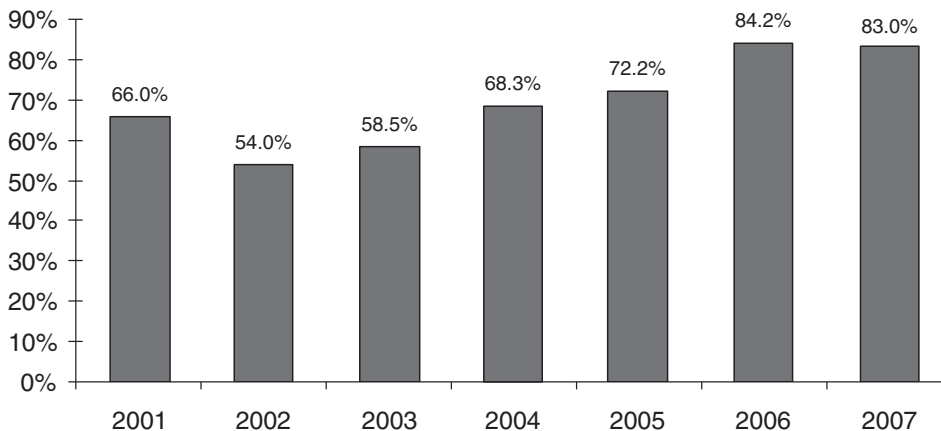
Source: China Heavy Machinery Industry Yearbook (2007-2008)

The supply of advanced large-scale integrated metallurgy equipment used in China was once monopolized by internationally renowned heavy equipment manufacturers. After China’s accession into the WTO, notwithstanding the accompanying significant downward adjustment of import duties, domestic heavy equipment manufacturers have increased their market share in the domestic market and enhanced their ability to design and manufacture integrated equipment.

The Opinions on Accelerating the Invigoration of the Equipment Manufacturing Industry (《國務院關於加快振興裝備製造業的若干意見》) promulgated by the State Council on June 23, 2006 provides guidelines on how to reduce the dependence on imports for 16 types of major technical equipment, including major integrated metallurgical equipment. This is expected to further promote the development of China’s equipment manufacturing industry, including the development of specialized metallurgical equipment manufacturing, and its capability of innovation.

The following chart shows the market shares in China held by domestic producers for the periods indicated.

### Market Shares of Domestic Metallurgical Equipment Manufacturers in China, 2001-2007



Source: China Heavy Machinery Industry Yearbook (2007-2008)

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## INDUSTRY OVERVIEW

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The growth of China’s specialized metallurgical equipment manufacturing industry primarily benefits from the following two factors:

***Overall growth of China’s iron and steel industry driving the demand for specialized metallurgical equipment***

From 2001 to 2008, China’s crude steel output grew at a CAGR of 18.7%. The rapid growth in production capacity of the iron and steel industry has fueled the demand for specialized metallurgical equipment. In 2008, the growth of China’s crude steel output has slowed down due to the adverse global and domestic economic conditions. However, according to China’s iron and steel industry policy and its plan for the overhaul and invigoration of China’s equipment manufacturing industry promulgated by the State Council in early 2009, policies requiring adjustment of the industry structure and geographic distribution of enterprises, enhancing the technological standards of the iron and steel industry, and eliminating the obsolete production capacity are expected to drive the growth of the iron and steel industry, thus increasing the demand for technologically advanced specialized metallurgical equipment.

***The PRC Government’s industrial policies facilitating the growth of China’s specialized metallurgical equipment manufacturing industry***

During the period in which China’s iron and steel industry and metallurgy industry underwent large-scale construction of production facilities, the demand for specialized metallurgical equipment was largely met through imports due to the limited domestic manufacturing capabilities and technological limitations. In recent years, with the iron and steel industry growing rapidly, the PRC Government has encouraged the domestic manufacturing of specialized metallurgical equipment.

The Eleventh Five-Year Plan of Researching and Developing Major Equipment and Industrial Technologies provides that the research of eight types of major technological equipment in the energy, materials and machinery manufacturing industries should be based on the major national projects, including “researching and manufacturing the key large-scale manufacturing equipment of wide thin strip steel and wide thick strip steel: large-scale integrated wide strip steel cold-hot rolling equipment (including wide strip steel hot-and-direct rolling equipment, and template and thickness control technologies); continuous cold rolling template and thickness control technologies, strip steel continuous annealing equipment, stretching and straightening technologies and equipment; and large-scale key equipment manufacturing medium plate.” As for the manufacturing of specialized non-ferrous metallic metallurgical equipment, the PRC Government has taken actions to promote the application of advanced technologies, strengthened the development of new technologies and new techniques, facilitated the commercialization of advanced new technologies, accelerated the elimination of obsolete technologies and techniques, and enhanced the quality and profitability of the non-ferrous metals industry.

In February 2009, the State Council approved in principle the Plan on the Overhaul and Invigoration of the Equipment Manufacturing Industry (the “Plan”) in an effort to facilitate the adjustment and upgrading of the industry structure and to enhance the overall competitiveness of China’s equipment manufacturing industry. According to the Plan, in order to accelerate the invigoration of the equipment manufacturing industry, localization of major technical equipment must be carried out on a large scale through the development of China’s key projects. Also, innovation must be enhanced through increased investments in technological improvements, with a view to significantly improving basic component manufacturing and basic technological standards. Furthermore, corporate mergers and restructuring as well as upgrading of products must be accelerated, with a view to facilitating optimization and upgrading of the industry structure and enhancing the overall competitiveness of the industry. The

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## **INDUSTRY OVERVIEW**

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adoption of the Plan has reinforced the PRC Government’s resolution to further develop China’s equipment manufacturing industry and to transform China into a leading equipment manufacturer.

In light of supportive government policies and in order to increase their competitiveness to meet market needs, metallurgical equipment manufacturers in China have increasingly focused on developing new technologies and processes, researching and developing high value-added products, and expanding into overseas markets. China’s specialized metallurgical equipment manufacturing industry is expected to migrate from low-end to high-end production, to replace imports with independent domestic innovations, and to enhance the industrialization of core technologies.

### **Steel Structures**

Steel structures refer to various types of structures that are composed of steel and connected by welding or fastening pieces, and are primarily used in industrial and civil engineering, railway and expressway bridges, power plant frame structures, power transmission and transformation towers, radio and television broadcasting towers, offshore petroleum platforms, petroleum and gas pipelines, public works construction and national defense and military applications.

Steel structures are lightweight, strong and seismic-resistant, suitable for industrial production, and require relatively short construction and installation periods. As compared to steel-concrete structures, steel structures have advantages not only in height, scale and weight, but also in energy conservation, environmental protection and recyclability, meeting the requirements of sustainable development. As a result, steel structures are widely used in the construction industry. In general, steel structures are categorized into high-standing high-rise steel structures, residential steel structures, plant-facility steel structures, large-span spatial steel structures and bridge steel structures.

As steel structures have been widely used in the construction industry, the steel structure manufacturing industry has grown significantly. As China’s construction industry continues to grow, the steel structure manufacturing market is expected to enter a phase of rapid development.

## **PROPERTY DEVELOPMENT INDUSTRY**

### **Overview**

The property development industry is closely linked to many other industries and is a core driver of the general economy. Since China implemented the housing reform in 1998 to abolish the welfare-oriented public housing distribution system, China’s property development industry has experienced significant growth.

China is in the development stage of industrialization and rapid urbanization. The steady growth in the overall economy and the increase in the level of per capita income and rapid urbanization have fueled the housing demand. Moreover, the continuous rise in living standards has driven the need for housing improvements. These forces have driven the rapid growth in China’s property development market for more than a decade and are the factors required for the continuing growth of the property development industry.



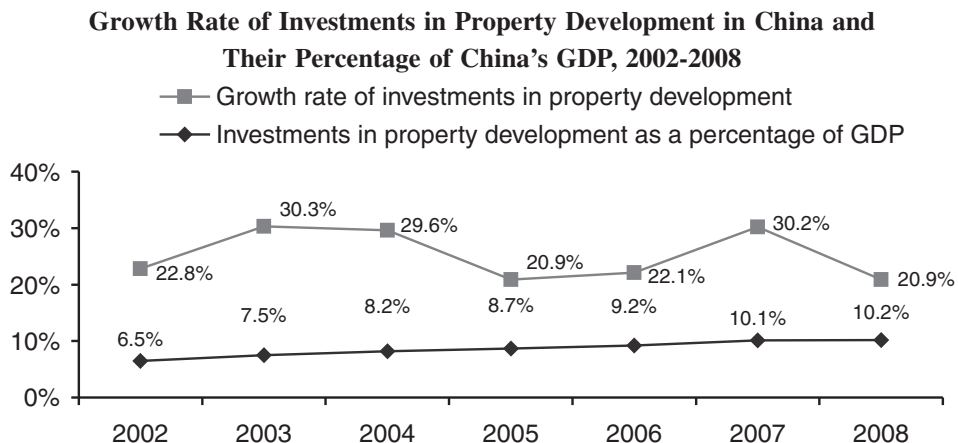
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## INDUSTRY OVERVIEW

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### Continued Growth in Investments in Property Development

From 2002 to 2008, property development investments continued to grow in China. Investments in property development grew at an average rate of approximately 25% each year from 2002 to 2004. Affected by the PRC Government’s macroeconomic control measures, the growth of property development investments began to slow down in 2005. From 2006 to 2007, property development investments resumed their upward trend. Recently, due to the changes in global and Chinese economic conditions, investments in property developments have slowed down, with the growth rate declining to 20.9% in 2008. The following chart shows the growth rate of property development investments and their percentage of China’s GDP for the periods indicated.



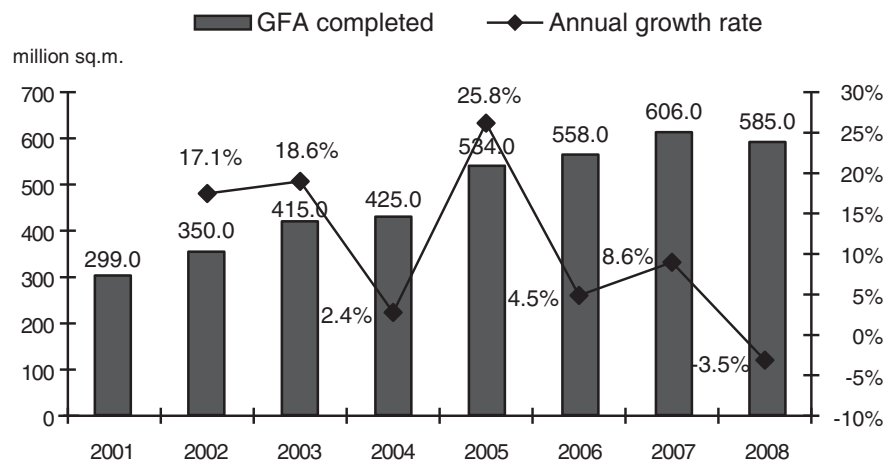
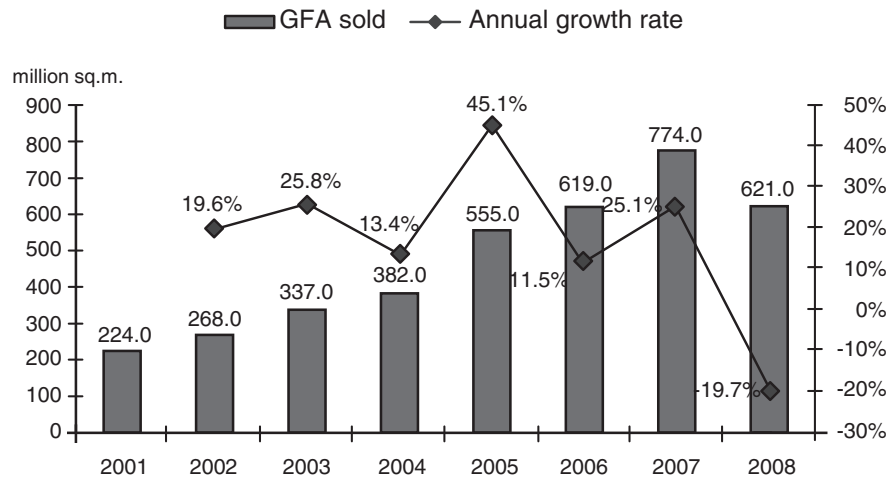
Sources: China Statistics Yearbook (2008); Statistical Communique of the PRC on the 2008 National Economic and Social Development

## INDUSTRY OVERVIEW

### Contemporaneous Growth of Construction and Sales of Commodity Properties

With the Chinese economy experiencing continuous growth and its urbanization rate increasing, the nationwide GFA of commodity properties sold and sales revenue grew steadily from 1999 to 2007. Before 2004, the GFA of commodity properties completed had been higher than the GFA sold. Since 2005, the GFA sold has outpaced GFA completed, demonstrating the growing demand with the supply slightly lagging behind demand. As a result of the changes in global and Chinese economic conditions, both total GFA sold and total GFA completed decreased in 2008, with total GFA sold decreasing at a faster pace than total GFA completed. However, total GFA sold still remained higher than total GFA completed in 2008. The following charts show the GFA sold and the GFA completed of commodity properties in China and their growth rates for the periods indicated.

**GFA Sold and GFA Completed of Commodity Properties in China, 2001-2008**



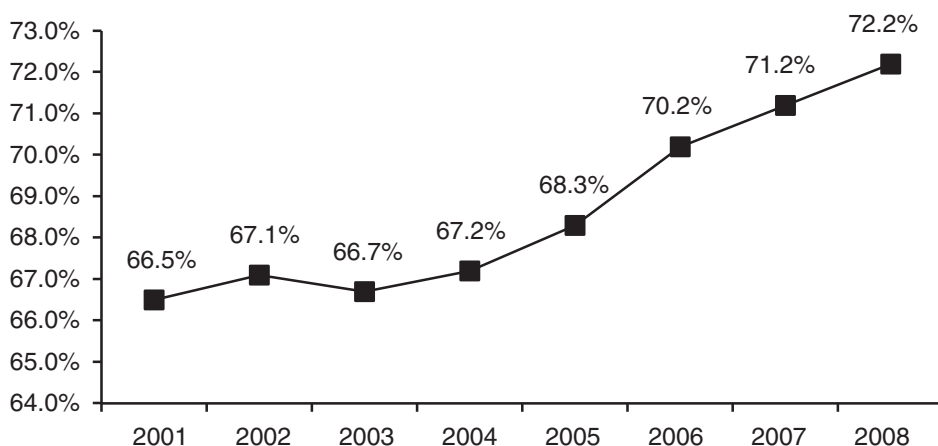
Sources: China Statistics Yearbook (2008); Statistical Communique of the PRC on the 2008 National Economic and Social Development

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### Dominance and Slightly Increasing Proportional Share of Residential Properties in Total Investments in Property Development

Since 2000, investments in residential property development have consistently accounted for a significant portion of China’s total investments in property development. Since 2004, the growth rate of investments in commodity residential properties has consistently exceeded the growth rate of investments in overall property development. The structure of property development investment has improved, with the investment focus further shifted toward residential properties. According to the National Bureau of Statistics, China’s total investments in residential property development were approximately RMB1.36 trillion in 2006, accounting for 70.2% of overall investment in property development, which represented a slight increase over the previous year. This was the first time that such percentage exceeded 70%, and it has since continued to rise. In 2008, total investments in residential property developments reached 72.2% of overall investment in property development. The following chart shows the investments in residential property development as a percentage of investments in overall property development in China for the periods indicated.

**Investments in Residential Property Development as a Percentage of Investments in Overall Property Development in China, 2001-2008**



Sources: China Statistics Yearbook (2008); Statistical Communique of the PRC on the 2008 National Economic and Social Development

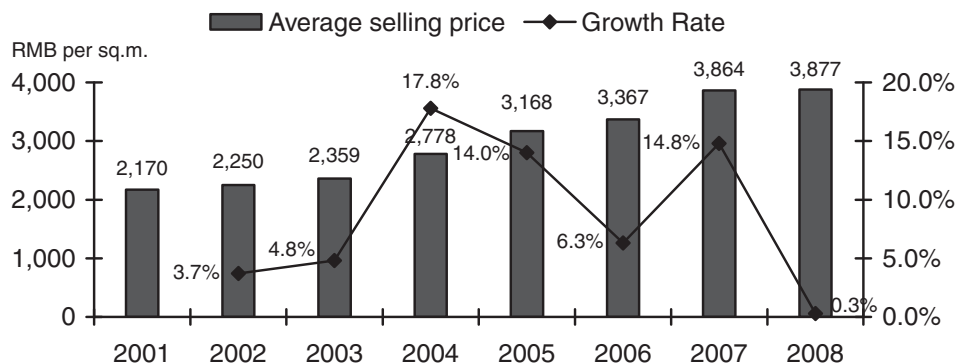
### Commodity Property Prices Continuing to Increase from 2001 to 2008

Since 2004, the PRC Government has adopted a series of measures to discourage speculations in the residential property market, increase the supply of social welfare housing and control the overall price increases in China’s property market, such as the Notice on Ensuring the Stabilization of the Prices of Residential Properties (《關於切實穩定住房價格的通知》) promulgated by the General Office of the State Council on March 26, 2006 to stabilize the prices of residential properties, the Six Measures to Promote the Healthy Growth of the Property Development Industry (《促進房地產業健康發展的六項措施》) (the “Six Measures”) promulgated by the State Council on May 17, 2006, and Forwarding the Notice of the Opinions of the Ministry of Construction and Other Government Branches on Adjusting the Supply Structure of Residential Housing and Stabilizing the Housing Prices (《國務院辦公廳轉發建設部等部門關於調整住房供應結構穩定住房價格意見的通知》) promulgated by the General Office of the State Council on May 24, 2006 to implement the Six Measures and regulate the sizes of residential units, the quantities of small residential units and the mortgage payments of residential properties and to protect the interests of low-income families.

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According to the National Bureau of Statistics, the average selling price of commodity properties in China increased continuously from 2001 to 2008. Property prices began to increase significantly and the rate of increase peaked in 2004. In 2007, the average selling price of commodity properties in China was RMB3,864 per sq.m., which represented an annual increase of 14.8%. As a result of the changes in global and Chinese macroeconomic conditions, the growth rate of the average selling price of commodity properties in China has begun to slow down significantly in 2008. The following chart shows the average selling price of commodity properties and its growth rate for the periods indicated.

**Average Selling Price of China’s Commodity Residential Properties and Growth Rate, 2001-2008**



Sources: China Statistics Yearbook (2008); National Bureau of Statistics, Real Estate Market Operation Conditions in 2008

### PRC Government’s Investment Plan for Social Welfare Housing Unveiled in Late 2008

In late 2008, the MOHURD unveiled a RMB900 billion social welfare housing investment plan in an effort to foster domestic demand to cope with the current economic crisis and to safeguard housing for medium- and low-income residents. According to the plan, two million units of low-rent housing and four million units of social welfare housing will be added in the three-year period following the announcement of the plan. Meanwhile, over one million housing units located in forestry, agricultural and mining areas will be renovated. Investments are expected to be RMB900 billion in aggregate, or an average of RMB300 billion per year during the period.

### PRC Government’s Macroeconomic Regulation of Property Development

Since 2003, the PRC Government has implemented certain measures to control conditions leading to local and structural overheating in the property development industry. Since April 2002, the State Council and other relevant authorities have issued a series of rules and notices to strengthen the management of state-owned land assets and rectify and regulate the property and land market. Since 2008, with the influence of the changes in global economic conditions, the PRC Government has also introduced certain new regulatory policies aiming to maintain the stability of the property market. The key regulatory measures are set out below:

- Since July 1, 2002, land for property development purposes may be granted only through public tender, auction or listing-for-sale; procedures and legal liabilities were specified in connection with transferring various kinds of lands for property development purposes through public tender, auction or listing-for-sale, thus standardizing the land supply activities;
- On April 26, 2004, the State Council issued the Circular on Adjusting the Capital Funds Requirement for Fixed Assets Investment Projects of Selected Industries (《國務院關於調整部分行業固定資產投資項目資本金比例的通知》) to raise the capital funds requirement for cement,

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electrolytic aluminum and property development (other than economically affordable housing) industries from 20% to no less than 35%;

- On August 30, 2004, the CBRC promulgated the Guidelines on the Risk Management of Commercial Banks Property Loans (《商業銀行房地產貸款風險管理指引》), which required commercial banks to strictly control and prohibit construction contractors from advancing funds to property development projects, required property developers to have own funding of no less than 35% of the total investments for a project, and required monthly payment by property buyers to be not more than 50% of their monthly income;
- On March 17, 2005, the PBOC increased the mortgage interest rates for individual residential housing;
- On June 1, 2005, the State Administration of Taxation imposed a business tax of 5% on sales of properties within two years of purchase by individuals;
- The CBRC requires property developers to obtain all “four certificates” (namely, the land use right certificate, the construction land planning permit, the construction work planning permit and the construction work commencement permit) before obtaining loans for property development. In addition, the borrowing property developers must have development qualifications of at least level two and have a project capital ratio of at least 35%;
- With regard to the integrated administration of taxation of the property industry, the State Administration of Taxation proposed to replace the “voluntary payment” of LAT and individual income taxes by mandatory collection;
- In July 2006, the State Council and nine ministries adopted macroeconomic control measures, including the Six Measures and the Opinions on Adjusting Residential Housing Supply Structure and Stabilizing Residential Housing Prices (《關於調整住房供應結構穩定住房價格的意見》) to adjust the structure of the property industry with regard to prices, taxation, construction design and planning, including imposing a business tax on sales of properties within five years of purchase;
- On July 14, 2006, the Ministry of Construction promulgated the Several Opinions on Implementing the Structural Ratio Requirement for New Residential Properties (《關於落實新建住房結構比例要求的若干意見》) to clarify the size ratio in new residential buildings: among the total GFA of new commodity residential buildings approved and constructed in each city each year, at least 70% of the residential units must have a GFA of less than 90 sq.m.;
- On July 26, 2006, the State Administration of Taxation issued the Notice on Collecting Individual Income Taxes on the Incomes from Individuals’ Transfer of Used Property (《徵收個人二手房轉讓所得稅通知》), imposing mandatory tax on the incomes from transferring used property;
- On December 28, 2006, the State Administration of Taxation issued the Notice on the Relevant Issues Concerning the Management of Settling Land Appreciation Tax with Property Development Enterprises (《關於房地產開發企業土地增值稅清算管理有關問題的通知》), requiring the settlement of LAT by each property development project since February 2007;
- In August 2007, the State Council promulgated the State Council’s Opinions on Resolving the Low-income Households’ Housing Difficulties (《國務院關於解決城市低收入家庭住房困難的若干意見》), emphasizing the need to redouble efforts to provide low-rent housing and social welfare housing;
- In September 2007, the PBOC and CBRC jointly issued the Notice on Strengthening the Administration of Commercial Real Estate Credit Loans (《關於加強商業性房地產信貸管理的通知》) to further

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strengthen the administration of property development loans, land reserve loans, residential housing consumption loans and commercial properties mortgage loans;

- In January 2008, the State Council promulgated the Notice on Promoting the Efficient and Collective Land Usage (《關於促進節約集約用地的通知》) to promote the economic use of land. The key provisions include: land that has been idle for two years becomes revocable without compensation under the law and such land shall be assigned to new uses; collection of 20% of the land grant or allocation amount as a land idleness fee on land that has been idle for one to two years; all provinces, autonomous regions and municipalities shall submit a special report to the State Council on the status of unused land by June 2008; land for operational uses, including industrial, commercial, tourism, entertainment and commodity residential properties (including ancillary land for office, scientific research and training uses), as well as land which has two or more intended users, is required to be transferred through public tender, auction or listing-for-sale procedures;
- On October 17, 2008, the State Council held an executive meeting, proposing that more efforts were required to develop social welfare housing and to lower housing-related business taxes;
- On November 12, 2008, the MOHURD unveiled a RMB900 billion social welfare affordable housing investment plan. According to the plan, two million units of low-rent housing and four million units of social welfare housing will be built in the next three years. Meanwhile, over one million housing units in shanty towns built in forested, agricultural and mining areas will be renovated. Investments are expected to be RMB900 billion in aggregate, or an average of RMB300 billion per year in the next three years;
- On November 27, 2008, the NDRC indicated that RMB280 billion out of the RMB4 trillion stimulus plan will be earmarked for social welfare housing projects;
- On December 22, 2008, the PBOC announced that the floor of commercial mortgage interest rates for individual residential housing would be lowered to 70% of the benchmark lending rate. The minimum down payment ratio requirement was adjusted to 20% of the total purchase price, and the interest rate on housing fund loans was also lowered;
- On December 23, 2008, the PBOC lowered the benchmark lending rate for the fifth time in 2008. The rate was lowered by a total of 216 basis points during 2008;
- On December 29, 2008, the MOF and the State Administration of Taxation jointly promulgated the Notice on the Business Tax Policies on Housing Transfers by Individuals (《關於個人住房轉讓營業稅政策的通知》), shortening the holding period applicable to the transfer of ordinary housing by individuals in 2009 from five years to two years, beyond which such transfer will be exempted from business tax; and
- In May 2009, the State Council promulgated the Notice on Adjusting the Capital Funds Requirement for Fixed Assets Investment Projects (《關於調整固定資產投資項目資本金比例的通知》), adjusting the capital funds requirement for social welfare housing and ordinary commodity residential property projects to no less than 20% and for other property development projects to 30%.