

ALUMINUM CORP OF CHINA LTD
Form 20-F
June 25, 2010

As filed with Securities and Exchange Commission on June 25, 2010

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 20-F

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF
THE SECURITIES EXCHANGE ACT OF 1934

OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF
1934

For the fiscal year ended December 31, 2009

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

OR

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 001-15264

(Exact name of Registrant as specified in its charter)

ALUMINUM CORPORATION OF CHINA LIMITED
(Translation of Registrant's name into English)

People's Republic of China
(Jurisdiction of incorporation or organization)

No. 62 North Xizhimen Street, Haidian District, Beijing
People's Republic of China (100082)

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(Address of Principal Executive Offices)

Xiong Weiping

No. 62 North Xizhimen Street, Haidian District, Beijing
People's Republic of China (100082)

Tel: (86) 10 8229 8103

(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
American Depositary Shares* Class H Ordinary Shares**	New York Stock Exchange, Inc.
* Evidenced by American Depositary Receipts. Each American Depositary Share represents 25 H Shares.	
** Not for trading, but only in connection with the listing of American Depositary Shares.	

Securities registered or to be registered pursuant to Section 12(g) of the Act.

None

(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

None

(Title of Class)

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of December 31, 2009:

Domestic Shares, par value RMB1.00 per share 9,580,521,924

H Shares, par value RMB1.00 per share 3,943,965,968

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes No

Note-Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (232.405 of this Chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files.) Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP International Financial Reporting Standards as issued by the International Accounting Standards Board Other

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17 Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes No

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Forward-Looking Statements

Certain information contained in this annual report, which does not relate to historical financial information, may be deemed to constitute forward-looking statements. The words or phrases "will likely result," "are expected to," "will continue," "is anticipated," "estimate," "project," "believe," or similar expressions are intended to identify "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities and Exchange Act of 1934, as amended. Such statements are subject to certain risks and uncertainties that could cause actual results to differ materially from historical results and those presently anticipated or projected. You should not place undue reliance on any such forward-looking statements, which speak only as of the date made. These forward-looking statements include, without limitation, statements relating to:

- * future general economic conditions;
- * future conditions in the international and PRC capital markets;
- * future conditions in the financial and credit markets;
- * future prices and demand for our products;
- * future PRC tariff levels for alumina, primary aluminum and aluminum fabrication products;
- * sales of our products;
- * the extent and nature of, and potential for, future development;
- * production, consumption and demand forecasts of bauxite, alumina, primary aluminum and aluminum fabrication products;
- * expansion, consolidation or other trends in the primary aluminum industry;
- * the effectiveness of our cost-saving measures;
- * future expansion plans and capital expenditures;
- * competition;

- * changes in legislation, regulations and policies;
- * estimates of proven and probable bauxite reserves;
- * our research and development plans; and
- * our dividend policy.

These statements are based on assumptions and analyses made by us in light of our experience and our perception of historical trends, current conditions and future developments, as well as other factors we believe are appropriate in particular circumstances. However, whether actual results and developments will meet our expectations and predictions depends on a number of risks and uncertainties, which could cause actual results to differ materially from our expectations. These risks are more fully described in the section headed "Item 3. Key Information - Risk Factors".

Consequently, all of the forward-looking statements made in this annual report are qualified by these cautionary statements. We cannot assure you that the actual results or developments anticipated by us will be realized or, even if substantially realized, that they will have the expected effect on us or our business or operations.

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SPECIAL NOTE ON THE FINANCIAL INFORMATION PRESENTED IN THIS ANNUAL REPORT

Our consolidated financial statements as of January 1, 2008 and December 31, 2008 and 2009 and for the years ended December 31, 2008 and 2009 included in this annual report on Form 20-F have been prepared in accordance with International Financial Reporting Standards, or IFRS, which includes all international accounting standards and interpretations as issued by the International Accounting Standards Board, or the IASB. Pursuant to the requirement under IFRS 1: First-Time Adoption of International Financial Reporting Standards, or IFRS 1, the date of our transition to IFRS was determined to be January 1, 2008, which is the beginning of the earliest period for which we present full comparative information in our consolidated financial statements. We make an explicit and unreserved statement of compliance with IFRS as issued by the IASB, with respect to our consolidated financial statements as of January 1, 2008 and December 31, 2008 and 2009 and for the years ended December 31, 2008 and 2009 included in this annual report on Form 20-F. PricewaterhouseCoopers, our independent registered public accounting firm, has issued an unqualified auditor's report on these consolidated financial statements.

In accordance with rule amendments adopted by the U.S. Securities and Exchange Commission, or the SEC, which became effective on March 4, 2008, we are not required to provide a reconciliation to generally accepted accounting principles in the United States, or U.S. GAAP. Furthermore, pursuant to the transitional relief granted by the SEC in respect of the first-time application of IFRS, no audited statement of comprehensive income, cash flow statement and related financial information prepared under IFRS for the year ended December 31, 2007 and no financial statements prepared under IFRS for the years ended December 31, 2005 and 2006 have been included in this annual report on Form 20-F.

The consolidated financial statements included in our annual reports on Form 20-F previously filed with the SEC were prepared in accordance with Hong Kong Financial Reporting Standards, or HKFRS. There are no significant differences between the statement of financial position as of January 1, 2008 prepared under IFRS and the statement of financial position as of December 31, 2007 prepared under HKFRS. For additional information, please refer to our annual reports on Form 20-F previously filed with the SEC.

Certain Terms and Conventions

"Chalco,"

"**the Company**," "**the Group**," "**our company**," "**we**," "**our**" and "**us**" refer to Aluminum Corporation of China Limited and its subsidiaries and, where appropriate, to its predecessors;

"A Shares"

and "**domestic shares**" refer to our domestic ordinary shares, with a par value of RMB1.00 each, which are listed on the Shanghai Stock Exchange;

"alumina-to-silica ratio"

refers to the ratio of alumina to silica in bauxite by weight;

"aluminum fabrication"

refers to the process of converting primary aluminum or recycled aluminum materials into plates, strips, bars, tubes and other fabricated products;

"Baotou Aluminum"

refers to Baotou Aluminum Co., Ltd., our wholly-owned subsidiary established under PRC law;

"Baotou Group"

refers to Baotou Aluminum (Group) Co., Ltd., one of our shareholders;

"bauxite"

refers to a mineral ore that is principally composed of aluminum;

"Bayer process"

refers to a refining process that employs a strong solution of caustic soda at an elevated temperature to extract alumina from ground bauxite;

"Chalco Hong Kong"

refers to Chalco Hong Kong Limited, our wholly-owned subsidiary established under Hong Kong law;

"Chalco Kailin"

refers to Shanghai Chalco Kailin Aluminum Co., Ltd.;

"Chalco Mining"

refers to Chalco Mining Co., Ltd, our wholly-owned subsidiary established under PRC law;

"Chalco Nanhai"

refers to Chalco Nanhai Alloy Company, our subsidiary established under PRC law;

"Chalco Qingdao"

refers to Chalco Qingdao Light Metal Company Limited, our subsidiary established under PRC law;

"Chalco Ruimin"

refers to Chalco Ruimin Company Limited, 90.12% of the equity interest of which is owned by us;

"Chalco Southwest Aluminum"

refers to Chalco Southwest Aluminum Company Limited, 60% of the equity interest of which is owned by us;

"Chalco Southwest Aluminum Cold Rolling"

refers to Chalco Southwest Aluminum Cold Rolling Company Limited, our wholly-owned subsidiary established under PRC law;

"Chalco Zunyi"

refers to Chalco Zunyi Alumina Co., Ltd., 67% of the equity interest of which is owned by us;

"China"

and the "**PRC**" refer to the People's Republic of China, excluding for purposes of this annual report, Hong Kong Special Administrative Region, Macao Special Administrative Region and Taiwan;

"China Nonferrous Metals Technology"

refers to China Nonferrous Metals Processing Technology Co., Ltd.;

"Chinalco"

and "**Chinalco Group**" refer to our controlling shareholder, Aluminum Corporation of China and its subsidiaries (other than Chalco and its subsidiaries) and, where appropriate, to its predecessors;

"CSRC"

refers to the China Securities Regulatory Commission;

"Fushun Aluminum"

refers to Fushun Aluminum Company Limited, our wholly-owned subsidiary established under PRC law;

"Gansu Hualu"

refers to Gansu Hualu Aluminum Company Limited, 51% of the equity interest of which is owned by us;

"Guan Lv"

refers to Shanxi Guan Lv Company Limited;

"Guangxi Huayin"

refers to Guangxi Huayin Aluminum Company Limited, 33% of the equity interest of which is owned by us;

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"Guangxi Investment"

refers to Guangxi Investment (Group) Co., Ltd., formerly known as Guangxi Development and Investment Co., Ltd., a PRC state-owned enterprise and one of our promoters and shareholders;

"Guizhou Development"

refers to Guizhou Provincial Materials Development and Investment Corporation, a PRC state-owned enterprise and one of our promoters and shareholders;

"H Shares"

refers to overseas listed foreign shares with a par value RMB1.00 each, which are listed on the Hong Kong Stock Exchange;

"Henan Aluminum"

refers to Chinalco Henan Aluminum Company Limited, 90.03% of the equity interest of which is owned by us;

"Hong Kong Stock Exchange"

refers to The Stock Exchange of Hong Kong Limited;

"Hongrui Chemical"

refers to Jiaozuo Hongrui Chemical Company Limited, which we acquired in October 2009 and made part of our Zhongzhou branch;

"Huasheng Jiangquan"

refers to Huasheng Jiangquan Group Co., Ltd.;

"Huaxi Aluminum"

refers to Huaxi Aluminum Company Limited, 56.86% of the equity interest of which is owned by us;

"Huayu Aluminum"

refers to Shandong Huayu Aluminum and Power Company Limited, 55% of the equity interest of which is owned by us;

"hybrid Bayer-sintering process"

refers to the refining process developed in China that combines the Bayer process and the sintering process to extract alumina from bauxite;

"Jiaozuo Wanfang"

refers to Jiaozuo Wanfang Aluminum Manufacturing Co. Ltd., 29% of the equity interest of which is owned by us. Jiaozuo Wanfang has been our subsidiary since January 1, 2008 after we established de facto control over it;

"Ka"

refers to kiloamperes, a unit for measuring the strength of an electric current, with one kiloampere equaling 1,000 amperes;

"kWh"

refers to kilowatt hours, a unit of electrical power, meaning one kilowatt of power for one hour;

"Lanzhou Aluminum"

refers to Lanzhou Aluminum Co., Ltd.;

"Liancheng branch"

refers to our wholly-owned branch, which was formerly known as Lanzhou Liancheng Longxing Aluminum Company Limited before we acquired 100% of its equity interest;

"Listing Rules"

and "**Hong Kong Listing Rules**" refer to the Rules Governing the Listing of Securities on the Hong Kong Stock Exchange, as amended;

"LME"

refers to the London Metal Exchange Limited;

"Longmen Aluminum"

refers to Shanxi Longmen Aluminum Co., Ltd., our subsidiary established under PRC law;

"Nanping Aluminum"

refers to Fujian Nanping Aluminum Company Limited;

"NDRC"

refers to the China National Development and Reform Commission;

"Northwest Aluminum"

refers to Northwest Aluminum Fabrication Plant, our wholly-owned branch;

"NYSE"

refers to the New York Stock Exchange Inc.;

"ore-dressing Bayer process"

refers to a refining process that we developed to increase the alumina-to-silica ratio of bauxite;

"Pingguo Aluminum"

refers to Pingguo Aluminum Company;

"refining"

refers to the chemical process used to produce alumina from bauxite;

"Research Institute"

refers to Zhengzhou Research Institute, our wholly-owned branch that conducts our research and development;

"RMB"

refers to Renminbi, the lawful currency of the PRC;

"SASAC"

refers to the State-owned Assets Supervision and Administration Commission of the State Council;

"Shandong Aluminum"

refers to our wholly-owned branch, which was formerly known as Shandong Aluminum Industry Co., Limited before we acquired 100% of its equity interest;

"Shanxi Huasheng"

refers to Shanxi Huasheng Aluminum Company Limited, 51% of the equity interest of which is owned by us;

"Shanxi Huaze"

refers to Shanxi Huaze Aluminum and Power Co., Limited, 60% of the equity interest of which is owned by us;

"sintering process"

refers to a refining process employed to extract alumina from bauxite by mixing ground bauxite with supplemental materials and heating the mixture in a coal-fired kiln;

"smelting"

refers to the electrolytic process used to produce molten aluminum from alumina;

"tonne"

refers to the metric ton, a unit of weight that is equivalent to 1,000 kilograms or 2,204.6 pounds;

"Xinan Aluminum"

refers to Xinan Aluminum (Group) Company Limited;

"Xincheng"

refers to Henan Xincheng Construction Supervisory Services Company Limited, a subsidiary that we acquired in October 2009;

"Yichuan Power"

refers to Yichuan Power Industries Group Company;

"Zhangze Electric Power"

refers to Shanxi Zhangze Electric Power Co., Ltd.;

"Zhongzhou Construction"

refers to Henan Zhongzhou Aluminum Construction Company Limited, a subsidiary that we acquired in October 2009; and

"Zunyi Aluminum"

refers to Zunyi Aluminum Co., Ltd., 62.10% of the equity interest of which is owned by us.

Translations of amounts in this annual report from Renminbi to U.S. dollars and vice versa have been made at the rate of RMB6.8259 to US\$1.00, the exchange rate as set forth in the H.10 statistical release of the Federal Reserve Board for December 31, 2009. We make no representation that any Renminbi or U.S. dollar amounts could have been, or could be, converted into U.S. dollars or Renminbi, as the case may be, at any particular rate, the rates stated below, or at all. See "Item 3. Key Information - Selected Financial Data - Exchange Rate Information" for historical exchange rates between the Renminbi and the U.S. dollar.

Any discrepancies in any table between the amounts identified as total amounts and the sum of the amounts listed therein are due to rounding.

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

A. Selected Financial Data

Historical Financial Information

The following tables present selected comprehensive income data and cash flow data for the years ended December 31, 2008 and 2009 and selected statement of financial position data as of December 31, 2007, 2008 and 2009. The selected financial information has been derived from, and should be read in conjunction with, the audited consolidated financial statements and their notes included elsewhere in this annual report. As disclosed above under the section headed "Special Note on the Financial Information Presented in this Annual Report", our consolidated financial statements have been prepared and presented in accordance with IFRS.

On October 29, 2009, we acquired the entire equity interest of Zhongzhou Construction, Hongrui Chemical, Xincheng and a limestone mining business from two subsidiaries of Chinalco. On May 30, 2008, we acquired six companies from Chinalco and China Nonferrous Metals Processing Technology Co., Ltd., an entity controlled by Chinalco. Later in the same year, on October 1, 2008, we acquired an aluminum alloy business from Pingguo Aluminum Company, another entity controlled by Chinalco. As our Company and all the foregoing companies and businesses were under the common control of Chinalco immediately before and after the acquisitions, these transactions were accounted for as common control business combinations using the merger accounting method for all periods presented in this annual report as if the acquisitions had been consummated since the inception of common control.

Year ended December 31

2008	2009	2009
RMB	RMB	US\$

(in thousands, except per share and per ADS data)

STATEMENT OF COMPREHENSIVE INCOME
DATA

Revenue	76,728,147	70,268,005	10,294,321
Cost of sales	(70,960,668)	(69,079,446)	(10,120,196)
Gross profit	5,767,479	1,188,559	174,125
Selling and distribution expenses	(1,562,841)	(1,264,920)	(185,312)
General and administrative expenses	(2,507,011)	(2,956,506)	(433,130)
Research and development expenses	(177,507)	(177,756)	(26,041)
Impairment loss on property, plant and equipment	(1,334)	(623,791)	(91,386)
Other income	100,781	151,142	22,142
Other gains, net	212,840	403,836	59,162
Operating profit/(loss)	1,832,407	(3,279,436)	(480,440)
Finance costs, net	(1,709,667)	(2,137,825)	(313,194)
Operating profit/(loss) after finance costs	122,740	(5,417,261)	(793,634)
Share of profits/(losses) of jointly controlled entities	1,672	(50,392)	(7,382)
Share of profits of associates	10,045	77,056	11,289
Profit/(loss) before income tax	134,457	(5,390,597)	(789,727)
Income tax benefit	34,172	711,003	104,163
	168,629	(4,679,594)	(685,564)

Profit/(loss) for the year			
Attributable to:			
Equity holders of the Company	19,485	(4,642,894)	(680,187)
Minority interest	149,144	(36,700)	(5,377)
Total attributable profit/(loss)	168,629	(4,679,594)	(685,564)
Profit/(loss) attributable to the equity holders:			
Basic and diluted net earnings/(loss) per share	0.0014	(0.3433)	(0.0503)

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Basic and diluted net earnings/(loss) per ADS	0.035	(8.5825)	(1.2575)
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OPERATING
SEGMENT DATA

Alumina	1,472,491	(2,448,517)	(358,710)
Primary aluminum	515,763	85,898	12,584
Aluminum fabrication	(318,090)	(611,782)	(89,627)
Corporate and others	(103,931)	(191,180)	(28,007)
Elimination	266,174	(113,855)	(16,680)

Total operating profit/(loss)	1,832,407	(3,279,436)	(480,440)
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As of December 31,

	2007	2008	2009	2009
	RMB	RMB	RMB	US\$
		(in thousands)		

STATEMENT OF FINANCIAL POSITION DATA

Total current assets	30,331,947	42,556,995	36,333,877	5,322,943
Total non-current assets	<u>75,594,525</u>	<u>93,055,157</u>	<u>97,641,312</u>	<u>14,304,533</u>
Total assets	<u>105,926,472</u>	<u>135,612,152</u>	<u>133,975,189</u>	<u>19,627,476</u>
Total current liabilities	23,646,302	38,622,098	40,029,861	5,864,408
Total non-current liabilities	<u>17,812,612</u>	<u>36,808,624</u>	<u>38,364,171</u>	<u>5,620,382</u>
Total liabilities	<u>41,458,914</u>	<u>75,430,722</u>	<u>78,394,032</u>	<u>11,484,790</u>
Net assets	<u>64,467,558</u>	<u>60,181,430</u>	<u>55,581,157</u>	<u>8,142,686</u>

Year ended December 31,

<u>2008</u>	<u>2009</u>	<u>2009</u>
RMB	RMB	US\$
<i>(in thousands)</i>		

OTHER FINANCIAL DATA

Net cash generated from/(used in) operating activities	5,023,984	(705,954)	(103,423)
Net cash used in investing activities	(22,207,473)	(9,477,193)	(1,388,417)
Net cash generated from financing activities	24,370,350	1,576,713	230,990
Net increase (decrease) in cash and cash equivalents	7,186,861	(8,606,434)	(1,260,850)

CAPITAL EXPENDITURE

Alumina	9,713,205	5,462,850	800,312
Primary aluminum	10,765,379	2,804,136	410,808
Aluminum fabrication	1,780,709	2,055,058	301,068
Corporate and others	143,013	102,830	15,065
	<hr/>	<hr/>	<hr/>
Total capital expenditure	22,402,306	10,424,874	1,527,253
	<hr/>	<hr/>	<hr/>

Exchange Rate Information

The following table sets forth information concerning exchange rates between the Renminbi and the U.S. dollar for the periods indicated. These rates are provided solely for your convenience and are not necessarily the exchange rates that we used in this annual report or will use in the preparation of our periodic reports or any other information to be provided to you. The source of these rates is the Federal Reserve Bank of New York for the periods through December 2008 and the Federal Reserve H.10 Statistical Release for the periods beginning on or after January 1, 2009. On June 18, 2010, the exchange rate for Renminbi was U.S. dollar 1.00 = RMB6.8267.

Period	Period End ⁽¹⁾	Average		
		Low	High	
(RMB per US\$1.00)				
2005	8.0702	8.1826	8.0702	8.2765
2006	7.8041	7.9579	7.8041	8.0702
2007	7.2946	7.5806	7.2946	7.8127
2008	6.8225	6.9192	6.7800	7.2946
2009	6.8259	6.8307	6.8176	6.8470
December	6.8259	6.8275	6.8244	6.8299
2010				
January	6.8270	6.8270	6.8258	6.8295
February	6.8258	6.8285	6.8258	6.8328
March	6.8258	6.8262	6.8254	6.8270
April	6.8247	6.8256	6.8229	6.8275
May	6.8305	6.8275	6.8245	6.8310
June (through June 18, 2010)	6.8267	6.8298	6.8267	6.8323

- (1) Annual averages are calculated by averaging the rates on the last business day of each month during the year. Monthly averages are calculated by averaging the rates on each business day during the month.

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

Our business, financial condition and results of operations are subject to various changing business, competitive, economic, political and social conditions in China and worldwide. In addition to the factors discussed elsewhere in this annual report, the following are some of the important factors that could cause our actual results to differ materially from those projected in any forward-looking statements.

Demand for our products is sensitive to cyclical fluctuations in our industry and general economic conditions, and a reduction in demand could materially and adversely affect our business, financial condition and results of operations.

Demand for our products is sensitive to cyclical fluctuations in our industry and significantly affected by general economic conditions. From the fourth quarter of 2008 through the second quarter of 2009, demand for our products decreased significantly due to the global recession, which resulted in a significant downturn in a number of our end-user markets. The performance of each of our business segments, in turn, was materially and adversely affected. Although the global economy, together with our production and sales volume, has been recovering since the second half of 2009, there is no assurance that there will not be a renewed decline in the global market for our products or the general economy. Decrease in demand for our products may have material adverse effect on our business, results of operations and financial condition. For example, diminished demand for our products may impair our ability to procure favorable payment terms from customers. To enhance our liquidity, we require our customers to make prepayments or deposits for purchases of alumina and primary aluminum and had a balance of approximately RMB989.7 million in prepayments and deposits as of December 31, 2009. We cannot guarantee that demand for our products will remain sufficiently strong for us to continue procuring favorable payment terms from customers. In addition, current economic conditions and uncertainty about future economic conditions make it challenging for us to forecast our results of operations, make business decisions and identify risks that may affect our business. If we are not able to timely and appropriately adapt to changes resulting from the difficult macroeconomic environment, our business, financial condition and results of operations may be materially and adversely affected.

Volatility in alumina and primary aluminum prices may adversely affect our business, financial condition and results of operations.

The prices of our key products have been historically volatile and fluctuate in response to general economic conditions, supply and demand and the level of global inventories. We price our alumina and primary aluminum products by reference to international and domestic market prices, the import price of alumina and domestic supply and demand, each of which may fluctuate beyond our control. Because most of our costs are fixed, we may not be able to respond promptly to a sudden decrease in alumina or primary aluminum prices. See " - Failure to maintain optimal utilization of our production facilities will adversely affect our gross and operating margins". Any significant fluctuation in international market prices could materially and adversely affect our business, financial condition and results of operations.

Our business requires substantial capital investments that we may be unable to fulfill.

Our plans to upgrade and expand our production capacity will require capital expenditures of approximately RMB14.6 billion in 2010. See "Item 4. Information on the Company - Property, Plant and Equipment - Our Expansion". We may also need additional funding for debt servicing, working capital, other investments, potential acquisitions and joint ventures and other corporate requirements. We may seek external financing to satisfy our capital needs if cash generated from our operations is insufficient to fund our capital expenditures or if our actual capital expenditures and investments exceed our plans. Our ability to obtain external financing at reasonable costs and on acceptable terms is subject to a variety of uncertainties. Failure to obtain sufficient funding for our development plans could adversely affect our business and prospects.

Our failure to successfully manage our business expansion would have a material adverse effect on our results of operations and prospects.

We may not be able to adequately manage our business growth, which we have achieved through organic growth, acquisitions and joint ventures. Our expansion has created, and will continue to place, substantial demand on our resources. Managing our growth and integrating our acquired businesses will require, among other things:

- * complying with the laws, regulations and policies that are applicable to the acquired businesses;
- * gaining market acceptance for new products and services and establishing relationships with new customers and suppliers;
- * achieving sufficient utilization of new production facilities to recover costs;
- * obtaining timely approval for the construction or expansion of alumina refineries, primary aluminum smelters and mining projects as required under PRC law;
- * managing relationships with employees, customers and business partners during the course of our business expansion and integration of new businesses;

- * attracting, training and motivating members of our management and workforce;
- * accessing our debt, equity or other capital resources to fund our business expansion, which may divert financial resources otherwise available for other purposes;
- * diverting significant management attention and resources from our other businesses; and
- * strengthening our operational, financial and management controls, particularly those of our newly acquired subsidiaries, to maintain the reliability of our reporting processes.

Any difficulty meeting the foregoing or similar requirements could significantly delay or otherwise constrain our ability to undertake our expansion plans, which in turn would limit our ability to increase operational efficiency, reduce marginal manufacturing costs or otherwise strengthen our market position. If we are not able to manage our growth successfully, our business and prospects would be materially and adversely affected.

Failure to maintain optimal utilization of our production facilities will adversely affect our gross and operating margins.

During 2009, we experienced an excess in production capacity at a number of our production facilities due to decreased industry demand for our products through the first half of 2009 and an increase in our purchase of alumina and primary aluminum from third parties pursuant to our flexible sourcing policy to enhance resource planning. We increased our external purchases of alumina and primary alumina for trading purposes to capitalize on volatile market prices in 2009 and to achieve cost savings in our production. We expect this trading business may continue in the future, depending on the market condition. Our increase in external purchases has reduced our utilization of certain production facilities, but has not resulted in an proportionate decrease in fixed costs such as leases and depreciation of plant, property and equipment. Given our high proportion of fixed costs, failure to maintain historical utilization rates may adversely affect our gross and operating margins.

Furthermore, we expect our production capacity expansion in recent years to increase our costs of sales, in particular depreciation and amortization costs. If we are able to maintain satisfactory facility utilization rates and increase our production output, our production capacity expansion will enable us to reduce our unit costs through economies of scale, as fixed costs will be spread over a higher volume of output units. Conversely, underutilization of our existing and newly acquired or constructed production facilities may increase our marginal production costs and prevent us from realizing the intended economic benefits of our expansion.

Our profitability may decline if energy costs rise or if our energy supplies are interrupted.

Our operations consume substantial amounts of energy. Although we generally expect to meet the energy requirements for our alumina refineries and primary aluminum smelters from a combination of internal and external sources, our results of operations may be materially and adversely affected by significant increases in electricity costs or our inability to extend energy supply contracts upon their expiration.

Electricity is the principal production cost in our primary aluminum operations. Although during 2009, our average cost per kilowatt-hour, or kWh, of electricity decreased by 3.0% from the prior year, we expect electricity prices to increase as the PRC economy continues its strong growth. If we are unable to pass on increases in energy costs to our customers, our operating margin, financial condition and results of operations could be materially adversely affected.

Losses caused by disruptions in the supply of power could materially and adversely affect our business, financial condition, results of operations and cash flows.

The production of primary aluminum requires a substantial and continuous supply of electricity. Interruptions in the supply of power can result in costly production shutdowns, increased costs associated with restarting production and the waste of production in progress. A sudden loss of power, if prolonged, can cause damage to or the destruction of production equipment and facilities. In such an event, we may need to expend significant capital and resources to repair or replace the affected production equipment to restore our production capacity. Various regions across China have experienced shortages and disruptions in electrical power, especially during peak demand in the summer or during severe weather conditions. Our operations in Guizhou Province were disrupted by power blackouts resulting from severe winter conditions in early 2008, and these disruptions damaged some production equipment and temporarily reduced our production capacity.

Our operations may be adversely affected if we are not able to procure sufficient coal or if coal prices rise.

We rely heavily on coal as our energy and fuel source in our production of alumina. As we significantly increase our refining capacity, our consumption of coal will increase accordingly. If our coal suppliers are not able to supply the amount of coal needed for our production due to constraints on coal transportation or any other reason, we may be forced to reduce our production output or suspend a portion of our refining operations, which could materially adversely affect our financial condition and results of operations. Although our average per tonne price of coal decreased by 18.5% from 2008 to 2009, we expect the price of coal to increase as the PRC economy continues its rapid growth. If we are unable to pass on increases in coal prices to our customers or offset price increases through productivity improvements, our operating margin, financial condition and results of operations could be adversely affected.

We may be unable to continue competing successfully in the markets in which we operate.

We face competition from both domestic and international primary aluminum producers. Our principal competitors are domestic smelters, some of which are consolidating and expanding their production capacities. These smelters compete with our primary aluminum operations on the basis of cost, quality and pricing. We also face increasing competition from international alumina and primary aluminum suppliers since the elimination of import tariffs on primary aluminum and alumina in China. Increasing competition in the markets in which we operate may reduce our selling prices or sales volumes, which could have a material adverse effect on our financial condition and results of operations. If we are unable to price our products competitively, maintain or increase our current share of China's alumina and primary aluminum markets or otherwise maintain our competitiveness, our financial condition, results of operations and profitability could be materially and adversely affected.

Our overseas expansion exposes us to political and economic risks and events beyond our control in the countries in which we plan to operate

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We are currently undertaking a number of overseas projects, including our bauxite exploration project in Aurukun, Australia and primary aluminum joint venture projects in Saudi Arabia and Malaysia, which require significant capital investment. See "Item 4. Information on the Company - History and Development of the Company - Overseas Development". As we are new to these overseas markets, we cannot assure you that our overseas expansion or investments will be successful or that we will not suffer foreign exchange losses in connection with our overseas investments.

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Our profitability and operations could be adversely affected if we are unable to obtain a steady supply of raw materials at competitive prices.

The price of bauxite, our most important raw material in alumina production, has been historically volatile. We source bauxite for our operations from three major sources, including mines that we own, our jointly operated mines and third-party suppliers. See "Item 4. Information on the Company - Business Overview - Raw Materials - Alumina - Supply". The extent to which we procure bauxite from each of these sources affect the security of our supply or cost of bauxite. In addition, our results of operations are also affected by increases in the cost of other raw materials. If we cannot obtain a steady supply of bauxite at competitive prices, our financial condition and results of operations could be materially adversely affected.

Transportation interruptions may affect our shipment of raw material and delivery of products.

Our operations require the reliable transportation of raw materials and supplies to our refining, smelting and fabrication sites and the delivery of finished products to our customers. Failure to receive timely shipments of raw materials and supplies could disrupt our operations, which could negatively affect our ability to fulfill our commercial commitments and reduce our profitability. Our alumina products are mainly transported by rail or truck, and our primary aluminum products are delivered to our customers primarily by rail. In 2008, our deliveries were affected by a snow storm in the first quarter of the year and severe earthquakes in Sichuan Province in May. If we are unable to make timely deliveries due to logistical and transportation disruptions, our production, reputation and results of operations may be adversely affected.

We may not successfully develop and implement new production methods and processes.

A main objective of our research and development is to develop new methods and processes to enhance the efficiency of our alumina refineries and increase our production yield from bauxite with low alumina-to-silica ratio. If the supply of high quality bauxite with a high alumina-to-silica ratio in China declines, our failure to develop such methods and processes or incorporate them into our production could diminish our competitiveness and impede our efforts to reduce unit costs.

The bauxite reserve data in this annual report are only estimates, which may prove to be inaccurate.

The bauxite reserve data on which we base our production, revenue and expenditure plans are estimates that we have developed internally and may prove inaccurate. There are numerous uncertainties inherent in estimating the recoverable quantities of reserves, including many factors beyond our control. If these estimates are inaccurate or the indicated tonnages are not recovered, our business, financial condition, and results of operations may be materially and adversely affected.

Our significant indebtedness could adversely affect our business, financial condition and results of operations.

We require a significant amount of cash to fund our existing operations and to meet our capital requirements, including the expansion and upgrade of our production capacity and product. As of December 31, 2009, we had approximately RMB25.8 billion in outstanding short-term bonds and bank borrowings (including the current portion of long-term bank and other borrowings) and RMB37.8 billion in outstanding long and medium-term bonds and long-term bank and other borrowings (excluding the current portion of these borrowings). This level of debt could have significant consequences on our operations, including:

- * reducing the availability of cash flow to fund working capital, capital expenditures, acquisitions and other general corporate purposes;
- * exposing us to interest rates fluctuations on our borrowings and the risk of being unable to rollover, extend or refinance our borrowings as necessary;
- * potentially increasing the cost of additional financing and making it more difficult for us to conduct equity financings in the capital markets or obtain government approvals to seek additional financing; and
- * putting pressure on our ADS price due to concerns over our ability to repay our debt.

Our ability to meet our payment and other obligations under our outstanding debt depends on our ability to generate cash flow in the future or to refinance such debt. We cannot assure you that our business will generate sufficient cash flow from operations to satisfy our obligations under our outstanding debt and to fund other liquidity needs. If we are not able to generate sufficient cash flow to meet such obligations, we may need to refinance or restructure our debt, reduce or delay capital investments, or seek additional equity or debt financing. The sale of additional equity securities could result in dilution to our ADS holders. A shortage of financing could in turn impose limitations on our ability to plan for, or react effectively to, changing market conditions or to expand through organic and acquisitive growth, thereby reducing our competitiveness. We cannot assure you that future financing will be available in amounts or on terms acceptable to us, if at all.

We may not realize the economic benefits of our expansion and vertical integration plans.

Cost savings and other economic benefits expected from our expansion and vertical integration plans may not materialize as a result of project delays, cost overruns, or changes in market conditions. Failure to obtain the intended economic benefits from these projects could adversely affect our business, financial condition and results of operations. We may also experience mixed results from our expansion and vertical integration plans while changes are being implemented or before the effects of the changes become evident. For example, in 2008, we acquired five aluminum fabrication plants, which significantly increased our annual aluminum fabrication production capacity and increased our total revenue. However, the change in our product mix resulted in a decrease in our average profit margin as the profit margins of aluminum fabrication products are generally lower than those of our other products.

The interests of our controlling shareholder, who exerts significant influence over us, may conflict with ours.

Our largest shareholder, Chinalco owns effective equity interest of 41.82% of our issued and outstanding share capital, of which 3.26% are indirectly owned through its controlled entities. The interests of Chinalco may conflict or even compete with our interests and those of our public shareholders. Chinalco may take actions that are in the interest of its subsidiaries, associates and other related entities to our detriment. For example, Chinalco may seek to influence our decision as to the amount of dividends we declare and distribute. Any increase in our dividend payout would reduce funds otherwise available for reinvestment in our businesses and thus may adversely affect our future prospects and financial condition.

In addition, Chinalco and a number of its subsidiaries and associates provide a range of services to us, including engineering and construction services, social services, land and property leasing as well as the supply of raw and supplemental materials. It would be difficult to find an alternative source for some services, such as educational and medical care services, that we receive from Chinalco. Our cost of operations may increase if Chinalco, its subsidiaries and associates are unable to continue providing such services to us.

We are subject to, and incur costs to comply with, environmental laws and regulations.

Because we produce air emissions, discharge waste water, and handle hazardous substances at our bauxite mines, alumina refineries, aluminum smelters and fabrication plants, we are subject to, and incur costs to comply with, environmental laws and regulations. Each of our production plants has implemented a system to control emissions and ensure compliance with PRC environmental regulations. We may incur significant additional costs if relevant laws and regulations change or enforcement of existing laws and regulations become more rigorous. Failure to comply with environmental laws and regulations may result in a variety of administrative, civil and criminal enforcement measures, including the assessment of monetary penalties, the imposition of remedial requirements and the issuance of orders enjoining future operations, all of which may adversely affect our business operations.

Our business is subject to unplanned business interruptions that may adversely affect our performance.

We may experience accidents in the course of our operations, which may cause significant property damage and personal injuries. Significant accidents and natural disasters may interrupt our operations or result in property or environmental damage, an increase in operating expenses or loss of revenue. The occurrence of accidents, natural disasters and the resulting consequences may not be covered adequately, or at all, by the insurance policies that we carry. In accordance with customary practice in China, we do not carry any business interruption insurance or third-party liability insurance for personal injury or environmental damage arising from accidents on our property or relating to our operations other than for our automobiles. Losses or payments incurred by us as a result of major

accidents or natural disasters may have a material adverse effect on our results of operations if such losses or payments are not fully insured.

We are operating a number of mines without a valid permit.

Our permits to mine bauxite at some of the bauxite mines that we own have expired and lapsed. While we are seeking to renew those expired permits, we may be subject to administrative fines for operating mines without a valid permit, or we may be ordered to cease our mining operations at such mines until we obtain a renewed permit. The failure to renew those expired mining permits may affect our financial condition and results of operations.

We may be subject to product liability claims.

Some of the products we sell or manufacture may expose us to product liability claims relating to property damage or personal injury. The successful assertion of product liability claims against us could result in significant damage payments and harm to our reputation. A successful product liability claim or series of claims brought against us could have a material adverse effect on our business, financial condition and results of operations.

Our H Shares may not be able to maintain its status as a constituent stock of the Hang Seng Index.

Our H Shares is a constituent stock of the Hang Seng Index and, as a result, may attract the interest of tracker funds that maintain investment portfolios intended to track the performance of the Hang Seng Index. We have no control over the selection of the Hang Seng Index constituent stocks and may not be able to maintain our H Shares as a constituent stock. If our H shares are removed from the Hang Seng Index, tracker funds may cease investing in our H shares and our share price may decline.

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The interests of the shareholders of Jiaozuo Wanfang may conflict with our interests.

The interests of minority shareholders of Jiaozuo Wanfang, whose A Shares are listed on the Shanghai Stock Exchange, may be inconsistent with our interests in certain circumstances. Jiaozuo Wanfang must comply with a number of PRC regulations designed to protect the interests of minority shareholders. According to the relevant PRC laws, when shareholders of Jiaozuo Wanfang vote by poll on connected transactions, connected parties such as us must abstain from voting. If we are unable to obtain approval of connected transactions from the minority shareholders of Jiaozuo Wanfang, such transactions cannot be implemented, which may affect our overall operational efficiency. Furthermore, we may be subject to legal proceedings initiated by the minority shareholders of Jiaozuo Wanfang challenging our actions as its controlling shareholder. Such legal proceedings could result in significant damage awards payable by us and disruption to our businesses, which in turn could have an adverse effect on our business and financial condition.

Our operations are affected by a number of risks relating to conducting business in the PRC.

As a significant majority of our assets and operations are located in the PRC, we are subject to a number of risks relating to conducting business in the PRC, including the following:

- * The central and local PRC government continues to exercise a substantial degree of control and influence over the aluminum industry in China and shape the structure and development of certain industries through the imposition of industry policies governing major project approvals, preferential tax treatment and safety, environmental and quality regulations. If the PRC government changes its current policies or the interpretation of policies that are currently beneficial to us, we may face pressure on profit margins and significant constraints on our ability to expand our business operations.
- * Although China has been transitioning from a planned economy to a market-oriented economy, a substantial portion of productive assets in China are still owned by the PRC government. It also exercises significant control over China's economic growth through the allocation of resources, control of payments of obligations denominated in foreign currencies and monetary and tax policies. Some of these measures benefit the overall economy of China, but may have a materially adverse impact on us.
- * In 2005, China adopted a managed floating exchange rate system to allow the value of the Renminbi to fluctuate within a regulated band based on supply and demand with reference to a basket of currencies. Since then the exchange rate between U.S. dollar and Renminbi has fluctuated and become more unpredictable following the international financial crisis with growing pressure on the Renminbi to appreciate. Any appreciation of the Renminbi will increase the prices of our export sales denominated in foreign currencies and reduce the Renminbi equivalent value of our trade and notes receivable denominated in foreign currencies, which may adversely affect our financial condition and results of operations. Our financial condition and operating performance may also be affected by changes in the value of currencies other than Renminbi in which our earnings and obligations are denominated.
- * Although the promulgation of laws and regulations covering general economic matters has increased since 1979, China has not developed an adequately comprehensive legal system and recently enacted laws and regulations may not sufficiently cover all aspects of economic activities in China. In particular, because these laws and regulations are relatively new, and because of the limited volume of published decisions and their non-binding nature, the interpretation and enforcement of these laws and regulations involve uncertainties. The system of laws and the enforcement of existing laws in the PRC may not be as certain in implementation and interpretation as in the United States. The PRC judiciary is relatively inexperienced in enforcing corporate and commercial law, leading to a higher than usual degree of uncertainty as to the outcome of any litigation. The inability to enforce or obtain a remedy under any of our present or future agreements could result in a significant loss of business, business

opportunities or capital.

Item 4. Information on the Company

A. History and Development of the Company

We were incorporated as a joint stock limited company under the Company Law of the PRC on September 10, 2001 under the corporate name Aluminum Corporation of China Limited. Our principal executive office and registered office are located in the People's Republic of China at No. 62 North Xizhimen Street, Haidian District, Beijing, China 100082, and our telephone number is (86) 10 8229 8103.

We are a vertically integrated aluminium producer with operations in bauxite mining, alumina refining, primary aluminium smelting and aluminium fabrication. We also provide ancillary products and services derived from or related to our aluminium operations. Pursuant to a reorganization agreement entered into among Chinalco, Guangxi Investment, Guizhou Development and our predecessor in 2001, substantially all of Chinalco's alumina and primary aluminium production operations, as well as a research institute and other related assets and liabilities, were transferred to us upon our formation. We acquired our bauxite mining operations and associated mining rights from Chinalco in a separate mining rights agreement.

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We have substantially increased the size and scope of our operations through organic growth as well as selective acquisitions and joint ventures. Our key operating assets include one subsidiary mainly engaged in bauxite mining; four integrated alumina and primary aluminium production plants; three stand-alone alumina refineries, including our jointly controlled entity, Guangxi Huayin, and one research institute; 13 stand-alone primary aluminium smelters, including our research institute; six aluminium fabrication plants; and one carbon production plant. In addition, we are constructing one bauxite mining facility, two alumina refineries, two primary aluminium smelters and one fluoride salt production facility. All of our production facilities are operated in accordance with ISO14001 standards.

Acquisitions

In April 2007, we issued 1,236,731,739 A Shares to acquire Shandong Aluminum and Lanzhou Aluminum in a share exchange. Prior to the share exchange, we owned 71.4% and 28% of the equity interest in Shandong Aluminum and Lanzhou Aluminum, respectively, which were listed on the Shanghai Stock Exchange prior to the acquisition. The share exchange resulted in the delisting and merger of Shandong Aluminum and Lanzhou Aluminum with us. At the end of 2007, we also acquired 100% of the equity interest in Baotou Aluminum, a primary aluminium producer, through a share exchange with various entities controlled by Chinalco to further reduce competition with our controlling shareholder.

In May 2008, we acquired five aluminium fabrication plants and a primary aluminium smelter from Chinalco and China Nonferrous Metals Technology for a total consideration of RMB4,181.0 million to achieve greater vertical integration. These acquisitions significantly increased our aluminium fabrication production capacity and enhanced our offering of aluminium fabrication products. In October 2008, we also acquired the aluminium alloy business of

Pingguo Aluminum for RMB69.0 million.

In October 2009, we acquired Zhongzhou Construction, Hongrui Chemical, Xincheng and the limestone mining business of Zhongzhou Aluminum Fengying Company Ltd. from two wholly-owned subsidiaries of Chinalco for a total cash consideration of RMB35.0 million, which was subsequently adjusted to RMB37.0 million pursuant to a valuation adjustment provision in the equity transfer agreement for these acquisitions. Zhongzhou Construction and Hongrui Chemical are principally engaged in the provision of construction and engineering services and supply of chemical products and accessory supplies, respectively, for the mining industry. Xincheng is principally engaged in the provision of supervisory services for construction projects.

We acquired the following subsidiaries in 2009:

Acquired subsidiaries	Principal products/services	Equity interest acquired by us
Z h o n g z h o u Construction	Provision of construction and engineering services for the mining industry	100%
Hongrui Chemical	Supply of chemical products and accessory supplies for the mining industry	100%
Xincheng	Provision of supervisory services for construction projects work	100%

Construction Projects

In December 2009, we completed the construction of production facilities at Chalco Nanhai, which increased our annual aluminium fabrication capacity by approximately 110,000 tonnes.

We invested approximately RMB10.4 billion on infrastructure construction and facility upgrades in 2009 and expect to increase our capital expenditure for the foregoing purposes to RMB14.6 billion in 2010. As of the date of this annual report, we have undertaken a number of facility expansion projects in China, each of which is expected to be completed in 2010. See "Item 4. Information on the Company - Property, Plant and Equipment - Our Expansion".

Overseas Development

On March 23, 2007, we entered into a development agreement with the Queensland State Government of Australia ("Queensland Government") to develop a bauxite and alumina project, or the Aurukun Project. We were issued a bauxite exploration permit in September 2007 by the Queensland Government and are currently preparing the feasibility report for this project.

On November 24, 2007, we entered into a framework agreement to jointly construct a primary aluminium plant with an annual production capacity of one million tonnes in Saudi Arabia with Malaysia Mining Company ("MMC") and Saudi Arabia Binladin Group ("SBG") and received the permit for the project from the Saudi Arabia General Investment Authority. On May 9, 2008, we entered into a joint venture arrangement with MMC and SBG, which provides for the establishment of a joint venture that will develop and operate the primary aluminium plant, as well as an adjoining power plant. We are currently preparing the feasibility report for this project.

On February 9, 2010, we entered into a framework agreement with GIIG Holding Sdn Bhd ("GIIG") to develop, own and operate a primary aluminium plant in Sarawak, Malaysia with an annual capacity of approximately 330,000 tonnes. Smelter Asia Sdn Bhd, a wholly-owned subsidiary of GIIG will be reorganized as a joint venture to oversee the development and operation of the primary aluminium plant project. The total investment of this project is estimated to be US\$1.0 billion, and we will contribute between US\$350 million to US\$400 million for 35% to 40% of the equity interest in the joint venture. We are currently preparing the feasibility report for this project.

Issuance of Short-term bonds

In March and June 2010, we issued one-year bonds, each in the principal amount of RMB5 billion for working capital purposes. The fixed annual coupons of these bonds were 2.73% and 2.86%, respectively.

Proposed Private Placement of A Shares

On August 24, 2009, the extraordinary general meeting, and A Share class meeting and H Share class meeting passed special resolutions authorizing us to issue up to one billion A Shares by way of private placement for expected proceeds not exceeding RMB10.0 billion. The special resolutions are valid for 12 months from the date of passage and can be extended. We intend to apply proceeds from this private placement to finance part of the 800,000 tonne alumina project at our Chongqing branch among three other projects and to supplement our working capital. See "- Business Overview - Our Expansion." On April 14, 2010, the proposed private placement was approved by the CSRC.

Proposed Issuance of H Shares

On June 22, 2010, the shareholders of the 2009 annual general meeting passed special resolutions, which are valid until the earliest of end of 12 months from the date of passage, the conclusion of our next annual general meeting or the date on which the authority set out in these resolutions are revoked or varied by a special resolution in a general meeting. The resolutions authorize us to issue up to 20% of the total nominal value of H Shares in issue as of the resolution date. Our Board is authorized to determine the use of the proceeds. The proposed issuance is subject to the approval by the CSRC and/or other relevant PRC government authorities.

B. Business Overview

Our Principal Products

We are China's largest producer of alumina, primary aluminum and aluminum fabrication products in terms of production volume. We have benefited from the strong growth of the PRC aluminum market, one of the world's fastest growing major aluminum markets. Based on 2009 production volume, we were the world's third largest producer of alumina and fourth largest producer of primary aluminum. Our aluminum operations span the aluminum

market value chain from bauxite mining to aluminum fabrication. Bauxite ore is refined into alumina, which is then smelted into primary aluminum. Primary aluminum, in turn, is a widely used metal and the key raw material in aluminum fabrication. Aluminum fabrication products have applications in the construction, transportation, power generation, automobile, packaging, machinery and durable goods industries. In addition to alumina, primary aluminum and aluminum fabrication products, we also produce and sell a comparatively small amount of alumina chemical products (alumina hydrate and alumina-based industrial chemical products), carbon products (carbon anodes and cathodes) and gallium. We organize and manage our operations according to our three principal products: alumina, primary aluminum and aluminum fabrication products. Revenue attributable to our alumina, primary aluminum and aluminum fabrication segments accounted for approximately 15.9%, 66.0% and 12.8%, respectively, of our total revenue in 2009. The remainder of our revenue was derived from research and development activities and other products and services.

Our alumina segment includes the production and sale of alumina as well as alumina-related products, such as alumina hydrate, alumina-based chemical products and gallium. Alumina accounted for approximately 92.6% of the total production volume for this segment in 2009. Alumina chemical products are used in the production of chemical, pharmaceutical, ceramic and construction materials. In the process of refining bauxite into alumina, we produce a small amount of gallium as a by-product. Gallium is a rare, high value metal with applications in the electronics and telecommunications industries.

Our primary aluminum segment includes the production and sale of primary aluminum and aluminum-related products, such as carbon products. Our principal primary aluminum product is ingots, which accounted for approximately 83.6% of our total production volume for this segment in 2009. Our standard 20 kilogram remelt ingots are used for general aluminum fabrication in the construction, power generation, automobile, packaging, machinery and durable goods industries. We produce substantially all the carbon products used at our smelters and sell a portion of our remaining carbon products to third parties.

Our aluminum fabrication segment includes the production and sale of aluminum fabrication products, including casts, planks, screens, extrusions, forges, powder and die castings, which are widely used in the construction, power generation, automobile, packaging, machinery and durable goods industries. We use recycled aluminum materials at Chalco Qingdao and Chalco Nanhai, two of our aluminum fabrication plants, to produce aluminum fabrication products.

Our Production Capacity

Our alumina production capacity has increased rapidly in the past few years, from approximately 5.4 million tonnes in 2002 to approximately 11.3 million tonnes in 2009. During the same period, our annual primary aluminum production capacity increased from approximately 750,000 tonnes to approximately 4.0 million tonnes. Our alumina and primary aluminum production represented approximately 32.7% and 26.5%, respectively, of China's production in 2009. Since 2008, we have significantly expanded our aluminum fabrication operations. Our annual aluminum fabrication production capacity increased from approximately 980,000 tonnes as of December 31, 2008 to approximately 1.3 million tonnes as of December 31, 2009.

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The following table sets forth the production capacity of our principal production facilities by business segment as of the indicated date:

Plant	As of December 31, 2009		
	Alumina	Primary Aluminum	Aluminum Fabrication Products
	(in thousand tonnes) ⁽¹⁾		
Guangxi branch	1,730.0	139.5	-
Zhongzhou branch	2,030.0	-	-
Qinghai branch	-	367.0	-
Shanxi branch	2,217.0	-	-
Guizhou branch	1,200.0	403.7	-
Henan branch	2,050.0	56.0	-
Shandong branch	1,500.0	75.0	-
Shanxi Huaze	-	350.0	-
Lanzhou branch	-	428.0	-
Shanxi Huasheng	-	220.0	-
Fushun Aluminum	-	240.0	-
Jiaozuo Wanfang ⁽²⁾	-	412.0	-
Zunyi Aluminum	-	235.0	-
Shandong Huayu	-	200.0	-
Gansu Hualu	-	160.0	-
Baotou Aluminum	-	388.0	-
Guangxi Huayin ⁽³⁾	530.0	-	-
Research Institute	20.0	18.0	-
Liancheng branch	-	270.0	-
Northwest Aluminum	-	-	100.0
Chalco Qingdao	-	-	120.0
Chalco Southwest Aluminum	-	-	350.0
Chalco Ruimin	-	-	270.0
Henan Aluminum	-	-	355.0
Huaxi Aluminum	-	-	22.0
Chalco Nanhai	-	-	110.0
Longmen Aluminum	-	17.0	-
Total	11,277.0	3,979.2	1,327.0

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- (1) Production capacity is calculated based on designed capacity, which accounts for various assumptions including downtime for ordinary maintenance and repairs, the ore grade of bauxite feedstock and subsequent capacity modifications.
- (2) We have de facto control over Jiaozuo Wanfang although we hold 29% of its equity interest. As it is a consolidated subsidiary, the indicated production capacity represents Jiaozuo Wanfang's entire production capacity.
- (3) As of December 31, 2009, we held 33% of the equity interest in Guangxi Huayin. The indicated production capacity represents our pro rata share of Guangxi Huayin's production capacity.

The following table sets forth a breakdown of our production volume by product segment for the periods indicated:

Production Volume by Product	Year ended December 31,		
	2007	2008	2009
	(in thousand tonnes, except gallium)		
Alumina segment			
Alumina	9,573.0	9,020.4	7,776.8
Alumina chemical products	1,023.0	1,038.1	1,034.3
Gallium (in tonnes)	33.2	39.6	20.9
Primary aluminum segment			
Primary aluminum ^{(1) (2)}	2,804.1	3,253.3	3,444.4
Carbon	1,291.7	1,601.3	1,626.0
Aluminum fabrication			
Aluminum fabrication products ⁽²⁾	80.0	353.1	412.6

- (1) Including ingots and other primary aluminum products.
- (2) The production volumes of Huaxi Aluminum, Chalco Ruimin, Chalco Southwest Aluminum, Henan Aluminum and Liancheng branch were

included beginning the date of their acquisition on May 30, 2008. For accounting purpose, merger accounting was applied to account for the acquisition of these four aluminum fabrication plants and primary aluminum plant. Accordingly, our consolidated financial statements have been retroactively restated to include their results of operations for the periods presented, including the periods before the acquisitions. For information on common control business combinations in accordance with IFRS, see Note 5 to our consolidated financial statements.

Production Process

Alumina

Alumina is produced from an aluminum-bearing ore called bauxite, through a chemical refining process. The refining process applied is determined by the mineral composition of the bauxite used in production. Our refineries may employ the sintering process, the Bayer process, the hybrid Bayer-sintering process or the ore-dressing Bayer process. Most of the bauxite reserves in China contain diasporic bauxite, which contains high alumina content and relatively high silica content, resulting in bauxite reserves with low alumina-to-silica ratio. The Bayer process cannot efficiently refine diasporic bauxite that has not undergone processing to increase its alumina-to-silica ratio. The sintering process or the hybrid Bayer-sintering process, which we have developed and refined to increase our refining yield, are suitable for refining low alumina-to-silica ratio bauxite. When we refine alumina using the Bayer process, we produce gallium as a by-product, which undergoes further processing before it is available for sale.

Primary Aluminum

We smelt alumina into primary aluminum through electrolytic reduction. The electrolytic process takes place in a reduction cell, or pot, a steel shell lined with carbon cathodes and refractory materials. Powerful electric currents are passed through the pot to produce molten aluminum. The molten aluminum is transferred to holding furnaces and then poured directly into molds to produce foundry, or remelt, ingots, or further refined to form fabricating ingots, which may be used directly in the aluminum fabrication process. Most of the primary aluminum we produce is in the form of ingots. All of our primary aluminum capacity use pre-bake anode reduction pot-lines, which have been adopted by most modern aluminum production facilities. In the pre-bake reduction process, the anodes are pre-formed in a separate facility where pollutants can be contained. The cells themselves are enclosed with removable panels, so that waste gas produced during the process can be extracted using large exhaust fans. Our waste gas is treated and purified to reduce dust and fluoride emissions to acceptable levels set by PRC environmental protection agencies.

Aluminum Fabrication Products

Aluminum fabrication products are formed from primary aluminum. We produce seven major categories of aluminum fabrication products, namely, casts, planks, screens, extrusions, forges, powder and die castings.

Production Facilities

Alumina

We currently operate seven alumina production facilities with a total designed annual production capacity of approximately 11.3 million tonnes as of December 31, 2009. Four of our refineries are integrated with primary aluminum smelters. The utilization rates of our alumina refineries during the first half of 2009 was adversely affected by the decrease in demand for primary aluminum due to the international financial crisis and global recession. However, as demand for primary aluminum has increased since the second half of 2009, our utilization rates have improved to reach an average of 78.1% for 2009. In 2009, we produced approximately 7.8 million tonnes of alumina, approximately 1.0 million tonnes of alumina chemical products and approximately 20.9 tonnes of gallium. In 2009, we supplied approximately 4.4 million tonnes, or 56.4% of our total production, of alumina to our own smelters and sold the remaining alumina to other domestic smelters. All of the alumina chemical products that we produced in 2009 were sold to third party customers in China or overseas. In addition, our Chongqing branch and Chalco Zunyi are each constructing refineries with a designed annual capacity of 800,000 tonnes and expected to complete construction in 2010.

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The following table sets forth the annual production capacity, output of alumina and alumina chemical products, utilization rate and production process applied in each of our alumina refineries and our Research Institute.

	As of	For the year ended December 31, 2009		
	December 31, 2009	Alumina production output	Alumina chemical products output ⁽²⁾	Utilization rate
(1)	Annual production capacity			Production process
(in thousand tonnes, except percentages)				

Shanxi branch	2,217.0	1,273.6	28.9	58.12% Hybrid Bayer-sintering
Henan branch	2,050.0	1,250.0	23.0	62.1% Hybrid Bayer-sintering
Shandong branch	1,500.0	768.8	615.9	92.3% Bayer
	1,200.0	1,172.3	4.3	98.1%

Guizhou branch				Hybrid Bayer-sintering
Zhongzhou branch	2,030.0	1,411.9	239.3	81.3% Sintering and Bayer
Guangxi branch	1,730.0	1,900.2	113.2	116.4% Bayer
Guangxi Huayin ⁽³⁾	530.0	-	-	-Bayer
Research Institute ⁽⁴⁾	20.0	-	9.7	48.5% Bayer
Total	<u>11,277.0</u>	<u>7,776.8</u>	<u>1,034.3</u>	<u>78.1%</u>

- (1) Production capacity is calculated based on designed capacity, which accounts for various assumptions including downtime for ordinary maintenance and repairs, the ore grade of bauxite feedstock and subsequent capacity modifications.
- (2) Capacity utilization rates represent the sum of (i) the output of alumina chemical products multiplied by a quotient based on the alumina content of the respective alumina chemical product and (ii) the output of alumina divided by production capacity of a particular plant. Utilization rates may exceed 100% if the ore grade of bauxite feedstock used is higher than expected in the calculation of design capacity.
- (3) Guangxi Huayin's designed capacity represents our pro rata share of this jointly controlled entity. Guangxi Huayin's production volume was not included in our production volume for 2009.
- (4) The alumina chemical products produced at our Research Institute are sold commercially, and such sales are included in our total revenue.

Primary Aluminum

We operate 17 primary aluminum production facilities located across nine provinces in China, including our Research Institute, which produces a limited amount of primary aluminum in connection with its research and development activities. Our smelters had an aggregate annual production capacity of approximately 4.0 million tonnes as of December 31, 2009. Four of our smelters are integrated with alumina refineries and are able to source

substantially all of their alumina requirements internally.

The low capacity utilization rates of our primary aluminum facilities in the first quarter of 2009 was caused by weak aluminum demand due to global economic conditions. However, demand for aluminum has gradually increased since March 2009 as a result of the recovery of global economy, the introduction of stimulus packages worldwide and the PRC government's purchase of non-ferrous metals for national reserves. We produced approximately 3.4 million tonnes of primary aluminum in 2009 and the average utilization rate for our smelters was 86.6% for the year.

The following table sets forth the annual production capacity, aluminum output, utilization rate and smelting equipment used in each of our aluminum smelters and our Research Institute.

Plant	As of	For the year ended December 31, 2009		
	December 31, 2009	Annual production capacity	Aluminum output ⁽²⁾	Utilization rate Smelting equipment
(1)				
		(in thousand tonnes, except percentages)		
Baotou Aluminum	388.0	400.5	103.2%	135kA, 200kA and 240kA pre-bake
Fushun Aluminum	240.0	76.4	31.8%	200kA pre-bake
Gansu Hualu	160.0	156.7	97.9%	160kA and 210kA pre-bake
Guangxi branch	139.5	103.0	73.8%	160kA and 320kA pre-bake
Guizhou branch	403.7	370.0	91.7%	160kA, 186kA and 230kA pre-bake
Henan branch	56.0	-	-	85kA pre-bake

Jiaozuo Wanfeng	412.0	420.7	102.1% 280kA pre-bake
Lanzhou branch	428.0	420.3	75kA, 200kA and 350kA 98.2% pre-bake
Qinghai branch	367.0	387.5	160kA and 105.6% 200kA pre-bake
Research Institute ⁽³⁾	18.0	16.6	150kA and 92.2% 300kA pre-bake
Shandong Huayu	200.0	156.2	78.1% 240kA pre-bake
Shandong branch	75.0	21.2	80kA & 200kA 28.3% pre-bake
Shanxi Huasheng	220.0	227.4	103.4% 300kA pre-bake
Shanxi Huaze	350.0	293.4	83.8% 300kA pre-bake
Zunyi Aluminum	235.0	144.8	200kA & 350kA 61.6% pre-bake
Liancheng branch	270.0	240.6	90kA & 200kA 89.1% pre-bake
Longmen Aluminum	17.0	9.1	53.5% 75kA pre-bake
	<hr/>	<hr/>	<hr/>
	3,979.2		86.6
Total	⁽⁴⁾ <hr/>	<hr/>	<hr/>
		3,444.4%	<hr/>

- (1) Production capacity takes into account designed capacity, downtime for ordinary maintenance and repairs and subsequent capacity modifications.
- (2) Capacity utilization rate is determined by dividing the production output by production capacity.
- (3) The primary aluminum produced at our Research Institute is sold and recorded in our total revenue.
- (4) Not including the aluminum alloy business of Pingguo Aluminum.

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Aluminum Fabrication Products

We currently operate seven aluminum fabrication facilities in China, among which, five facilities were acquired in 2008. We completed the construction of the facilities of Chalco Nanhai in December 2009, which increased our annual aluminum fabrication capacity by approximately 110,000 tonnes to approximately 1.3 million tonnes as of December 31, 2009. In 2009, we produced approximately 457,800 tonnes of aluminum fabrication products and the average utilization rate for our aluminum fabrication plants was 38.7% for the year. Three of our fabrication facilities are constructing new facilities or undergoing expansion, which we expect will increase our fabrication capacity by a total of 385,000 tonnes to approximately 1.7 million tonnes by the end of 2010.

The following table sets forth the annual production capacity, output of aluminum fabrication products, principal products and utilization rate of each of our aluminum fabrication plants.

	As of	For the year ended December 31, 2009		Utilization rate
	December 31, 2009	Aluminum fabrication product output	Principal products	
(1)	Annual production capacity	(2)		
		(in thousand tonnes, except percentages)		

Northwest Aluminum	100.0	43.3	planks, screens, wires, tubes and profiles	43.3%
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Chalco Ruimin	270.0	86.2 planks and screens	71.8%
Huaxi Aluminum	22.0	13.4 strips and screens	60.9%
Chalco Southwest Aluminum	350.0	159.2 belts	45.5%
Henan Aluminum	355.0	96.9 planks, strips and screens	27.3%
Chalco Qingdao	120.0	13.7 ingot	11.4%
Chalco Nanhai	110.0	--	-
Total	<u>1,327.0</u>	<u>412.6</u>	<u>38.7%</u>

-
- (1) Production capacity takes into account designed capacity, downtime for ordinary maintenance and repairs and subsequent capacity modifications.
 - (2) Capacity utilization rate is determined by dividing the production output by production capacity.

Raw Materials

Alumina

Bauxite is the principal raw material in alumina production. Most of the bauxite in China is $Al_2O_3 \cdot H_2O$ mineral, which is uncommon in other parts of the world. Bauxite deposits have been discovered across a broad area of central China and are especially abundant in the southern and northern parts of central China. The largest bauxite deposit in China lies in Shanxi Province.

Rock Formation and Mineralization

. The bauxite deposits of our mines, except those of Guangxi Pingguo Mine which is an accumulation deposit due to original erosion, usually have similar stratigraphical sequences. Primary bauxite deposit, as a type of sedimentary $Al_2O_3 \cdot H_2O$ of Carboniferous or Permian age, is contained in clay rock, limestone or coal seams. A zony red shale

is usually located at the bottom of the bauxite and the red seam distributes over the irregular "karst-type" erosion face on the top of Ordovician limestone. Aluminum deposits in northern China are usually covered with a very thick Quaternary weathering.

The thickness and quality of deposits vary with our mine locations. Quality is usually consistent in smooth sections but changes sharply in karst "billabong" terrain. The level of hardness of minerals also varies. A sequence that includes a seam of hard bauxite of fine quality in the middle and soft bauxite of inferior quality on the bottom and top seams is common in deposits.

Generally, deposits are horizontal or with an obliquity of 0 to 8 degrees, but there are also steep deposits at an angle of 75 degrees, such as the Guizhou No. 2 Mine. Most of the original mineralization is not influenced by folds and faults, and some fractures of a low obliquity and folds emerge in certain deposits, which is evident in the Guizhou No. 2 Mine area where the underground mining method must be used due to the obliquity of its bauxite body reaching 70 degrees with the influence of folds and several meters of dislocation arising from partial faults.

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Our bauxite deposits are divided into three groups. They are primarily distinguished by drill hole spacing and the composition of the deposit, which can encompass rock formations such as intercalated clays, bauxite, footwall iron clay or Ordovician limestone. Bauxite deposit groups vary in the thickness and mineral quality of its reserves.

We use the Chinese bauxite deposit estimation method, which is calculated using cutoff grades and thickness to outline continuous areas within the limits defined by samples of marginal grade. We utilize actual limiting sample points that are joined to create a polygonal outline, and grades are then calculated using a length weighted arithmetic average. The Chinese program of systematic and accurate method of test boring, inspection pit, trial trench, density, tonnage analysis and calculation applied to the geological work of bauxite in China is an appropriate method to analyze these types of deposits.

Supply

. To support the growth of our alumina production, we continuously seek opportunities to streamline and optimize our bauxite procurement, including the ongoing restructuring of our joint mining operators. Except for our Shandong branch, all of our refineries are located in the four provinces where over 90% of China's potentially mineable bauxite has been found. We generally source our bauxite from mines close to our refineries to control transportation costs. Historically, we have procured our bauxite supply principally from three sources:

- * our own bauxite mining operations;
- * jointly operated mines; and
- * other suppliers, which principally include small independent mines in China and, to a lesser extent, international suppliers.

On average, our refineries consume approximately 2.1 tonnes of bauxite to produce one tonne of alumina. We used approximately 20.2 million tonnes, 18.4 million tonnes and 17.7 million tonnes of bauxite in our alumina production in 2007, 2008 and 2009, respectively. The combined production of our own mines and jointly operated mines was 11.1 million tonnes in 2009, representing an increase of 33.9% from 2008. The production of our own mines reached 10.7 million tonnes in 2009, representing an increase of 54.8% from 2008. The production volume of our jointly operated mine was 439,500 tonnes in 2009, representing a decrease of 68.7% from 2008. We purchase bauxite from a number of suppliers and are not dependent on any supplier for our bauxite requirements. We acquired one mine in 2009 and continue to explore new bauxite reserves to replenish our reserves.

The following table sets forth the volumes and percentages of bauxite supplied by our own mines, jointly operated mines and other suppliers for the periods indicated:

	Year ended December 31,					
	2007		2008		2009	
	Bauxite	Percentage	Bauxite	Percentage	Bauxite	Percentage
	(in thousand tonnes, except percentages)					
Own mines	4,770.2	20.3%	6,885.0	30.9%	10,656.8	61.3%
Jointly operated mines	3,751.6	15.9%	1,403.5	6.3%	439.5	2.5%
Other suppliers	15,015.8	63.8%	13,992.4	62.8%	6,293.3	36.2%
Total	23,537.6	100%	22,280.9	100%	17,389.6	100%

Own Mines.

As of December 31, 2009, we owned and operated 14 mines that had approximately 263.15 million tonnes of aggregate bauxite reserves. As none of our mines produce bauxite for external sales, we have full access to the bauxite produced by our own mines. For the three years ended December 31, 2009, we extracted 4,770,200 tonnes, 6,885,000 tonnes and 10,650,000 tonnes of bauxite from our own mines, representing approximately 20.3%, 30.9% and 61.3% of our alumina production requirements, respectively. To maintain the title to our mines, or obtain the title to new mines, we are required to comply with mining qualifications approved by the relevant PRC authorities and pay an annual fee equivalent to RMB1,000 per km² for our mines.

Our reported bauxite reserves for our own mines do not exceed the quantities that we estimate could be extracted economically if future prices were at similar levels to average historical prices for traded metals for the years ended December 31, 2007, 2008 and 2009, or the three year historical contracted prices for bulk commodities. However, we do not use the three year historical bauxite or aluminum price to determine bauxite reserves, nor did we utilize any currency conversion factors or pricing related mechanisms. Instead, the primary criteria are the specifications required by our alumina refineries, as well as certain modifying factors that are dependent on reserve quality.

Each of our mines is accessible by motor vehicles via public roads, highways or both. All of our own mines are powered by diesel fuel or generators and have access to water from local rivers, lakes or underground sources. The following table sets forth information for our own mines as of December 31, 2009:

Mine	Location	Nature of ownership ⁽¹⁾	Mining method	Permit renewal ⁽¹⁾	Present condition/Current state of exploration	Bauxite	
						Capacity	Production
						(2)	
						(in thousand tonnes)	(in thousand tonnes)
Pingguo Mine	Guangxi Zhuang Autonomous Zone	100% owned and operated by Chalco	Open pit	September 2031	Fully developed and operational	4,080.0	4,256.5
Guizhou Mine	Guizhou Province	100% owned and operated by Chalco	Open pit / underground	September 2016 - December 2038	Fully developed and operational	900.0	774.4
Zunyi Mine	Guizhou Province	100% owned and operated by Chalco	Open pit	February 2020	Not operational	-	-
Xiaoyi Mine	Shanxi Province	100% owned and operated by Chalco	Open pit	November 2009 - September 2031	Fully developed and operational	2,750.0	1,490.5
Mianchi Mine	Henan Province	100% owned and operated by Chalco	Open pit / underground	December 2009 - October 2031	One stope is currently under development	300.0	1,141.4
Luoyang Mine	Henan Province	100% owned and operated by Chalco	Open pit/ underground	December 2013 - October 2031	Fully developed and operational	700.0	721.2
Xiaoguan Mine	Henan Province	100% owned and operated by Chalco	Open pit / underground	January 2011 - October 2031	Fully developed and operational	180.0	1,297.2
Sanmenxia	Henan Province	100% owned and operated by Chalco	Open pit/ underground	April 2016 - August 2023	-Under construction	-	-
Xuchang ⁽³⁾						-	-

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	Henan Province	100% owned Open pit / by Chalco and operated by Chalco	March 2010 - May 2012	Third-party operator		
Jiaozuo	Henan Province	100% owned Open pit and operated by Chalco	October 2011 - September 2016	Fully developed and operational	-	218.0
Pingdingshan	Henan province	100% owned Open pit / and underground operated by Chalco	October 2017 - February 2018	Fully developed and operational	-	694.6
Yangquan Mine	Shanxi Province	100% owned Open pit / and underground operated by Chalco	December 2009 - September 2031	Fully developed and operational	150.0	63.0
Nanchuan Mine	Chongqing City	100% owned underground and operated by Chalco	November 2016 - November 2026	Fully developed and operational	1,650.0	-

- (1) All conditions to retain our properties or leases had been fulfilled as of December 31, 2009. Each mine may be covered by one or more mining permits and the range of permit renewal dates is set forth above.
- (2) The annual production capacity of our own mines was 10.7 million tonnes of bauxite as of December 31, 2009.
- (3) Yuzhong Mine was renamed Xuchang Mine in 2009.

The respective terms of mining rights permit are the shorter of the estimated working life of the mine and 30 years beginning in 2001. We are required to obtain mining rights permits to engage in mining. Under PRC laws and regulations, a mine owner must prepare and submit exploration reports for a mine to the local government to obtain a mining rights permit. If an applicant for the mining rights permit is not the owner of a mine, the applicant must first enter into a lease agreement with the mine owner before submitting an application. The development license is subject to renewal on a regular basis. Furthermore, we are required to obtain land use rights on the land in order to operate these mines. We lease the land use rights relating to all the foregoing mines from Chinalco pursuant to a land use rights lease agreement that became effective upon our formation. Chinalco's land use rights relating to over 90% of our mining properties are valid for a 50-year term beginning on July 1, 2001. The remaining land use rights relating to the mines we own and operate are for shorter terms, some as short as one year. All of our land use rights lease agreements end on the expiry date of the mining rights or the end of the working life of the mine, whichever is earlier. Both the land use rights and land use rights lease agreements are renewable.

The following table sets forth certain estimated details of the reserves for our own mines as of December 31, 2009.

Mine	Total Reserves ⁽¹⁾⁽²⁾ Area (km ²)	Average Grade (%)		Ratio of
		Al ₂ O ₃	SiO ₂	Average A/S ₃

	(million tonnes)				
Pingguo	136.04	45.57	57.33	7.00	8.20
Guizhou 1	6.40	5.35	66.89	11.91	5.61
Guizhou 2	26.50	21.67	63.83	10.13	6.30
Zunyi	2.48	2.83	55.32	8.80	6.29
Xiaoyi	10.24	29.07	63.43	12.52	5.07
Mianchi	13.02	6.11	64.08	11.98	5.35
Luoyang	7.62	2.87	63.23	9.55	6.62
Xiaoguan	41.97	27.01	63.79	14.06	4.54
Sanmenxia	13.85	27.18	64.56	11.17	5.78
Xuchang	7.15	-	-	-	-
Jiaozuo	10.44	2.91	58.01	16.19	3.58
Pingdingshan	4.99	0.55	66.77	12.79	5.22
Yangquan	3.19	3.68	60.05	12.42	4.83
Nanchuan	20.98	42.54	61.29	13.75	4.46
Total (average)	304.89	263.15	60.42	10.00	6.04
By reserve type					
Proven reserve		77.21	62.01	9.90	6.26
Probable reserve		185.95	59.77	10.04	5.95
Total (average) reserves		263.15	60.42	10.00	6.04

- (1) Our reserves take into consideration mining dilution and loss factors, which generally vary from 5% to 10% and are based on the planned mining method and selected drill data for each site.
- (2) Our metallurgical recovery factors are calculated in accordance with the relevant PRC mining standards and vary from mine to mine.
- (3) Refers to the ratio of average grade of Al_2O_3 to the average grade of SiO_2 of the reserves.

Jointly Operated Mines.

Jointly operated mines are generally operated pursuant to long-term contractual arrangements in which we typically contribute resources such as funding, equipment, labor and management, and the other parties contribute land and/or mining rights and certain personnel resources. The other parties are also typically responsible for obtaining all relevant certificates or approvals in respect of the lands. Generally, we are able to control the mining operations of our jointly operated mines, including determination of production schedules as well as the amounts and grades of bauxite produced. To optimize our resources and reduce costs, we have managed our jointly operated mines by: (i) establishing joint ventures with other companies to invest in and share resources; (ii) providing mining technology or other resources to companies with local mines in return for exclusive purchase rights to the bauxite ores; or (iii) contracting with local companies for their mining services to operate mines owned by us.

In the years ended December 31, 2007, 2008 and 2009, our jointly operated mines produced bauxite of 3,751,600 tonnes, 1,403,500 tonnes and 439,500 tonnes, representing approximately 15.9% , 6.3% and 2.5% of the demand from our alumina production, respectively.

Each one of our jointly operated mines is accessible by motor vehicles via public roads, highways or both. The following mines are powered by diesel fuel or generators and have access to water from local rivers, lakes or underground sources. The following table sets forth information on our jointly operated mines as of December 31, 2009:

<u>Mine</u>	<u>Province</u>	<u>Name of joint operator</u>	<u>Mining method</u>	<u>Permit Renewal⁽²⁾</u>	<u>Present Condition/ Current State of Exploration</u>	<u>Material Terms of Operating Agreements</u>
Goujiang	Guizhou	Guojiang Economic Development Mining Co., Ltd.	open pit	August 2011	operational	This mine is 100% owned by Guojiang Economic Development Mining Co., Ltd. We provide mining services in return for the exclusive purchase rights to the mined bauxite for a period of ten years starting from 1998.
Maige ⁽³⁾	Guizhou	Qingzhen City Xinfeng Mining Co., Ltd.	open pit	October 2012	operational	This mine is 100% owned and operated by Qingzhen City Xinfeng Mining Co., Ltd. We

Zhijin	Guizhou	Qingzhen City Xingwang Mining Co., Ltd.	open pit	September 2005	operational	possess the exclusive purchase rights to the mined bauxite for 15 years starting from 2000. This mine is 100% owned by Qingzhen City Xingwang Mining Co., Ltd. We possess the exclusive purchase rights of the mined bauxite for 30 years starting from 2003.
Tuanxi	Guizhou	Guizhou Chengqian Mining Co., Ltd.	open pit	May 2009	operational	This mine is 100% owned and operated by Guizhou Chengqian Mining Co., Ltd. We possess the exclusive purchase rights to the mined bauxite for 15 years starting from 2001.
Wenquan Town	Shanxi	n/a ⁽¹⁾	open pit	April 2009	under development	We are the sole owner of these mines and are conducting research on the development plan of these mines and searching for operators for future development.
Shangtan	Shanxi	n/a ⁽¹⁾	open pit	December 2009	under development	We are the sole owner of these mines and are conducting research on the development plan of these mines and searching for operators for future development.
Yangpo	Shanxi	n/a ⁽¹⁾	open pit	July 2008	under development	We are the sole owner of these

Shaping	Shanxi	n/a ⁽¹⁾	open pit	January 2010	under development	mines and are conducting research on the development plan of these mines and searching for operators for future development. We are the sole owner of these mines and are conducting research on the development plan of these mines and searching for operators for future development.
Jindui	Shanxi	n/a ⁽¹⁾	open pit	January 2010	under development	We are the sole owner of these mines and are conducting research on the development plan of these mines and searching for operators for future development.
Shicao	Shanxi	n/a ⁽¹⁾	open pit	August 2008	under development	We are the sole owner of these mines and are conducting research on the development plan of these mines and searching for operators for future development.
Nanpo	Shanxi	n/a ⁽¹⁾	open pit	July 2010	under development	We are the sole owner of these mines and are conducting research on the development plan of these mines and searching for operators for future development.
Sunjiata	Lin Xian Company	n/a ⁽¹⁾	underground	December 2009	under development	We are the sole owner of these mines and are

Xishan	Shanxi	n/a ⁽¹⁾	open pit	December 2010	under development	conducting research on the development plan of these mines and searching for operators for future development. We are the sole owner of these mines and are conducting research on the development plan of these mines. We are searching for operators for future development.
Niucagou	Shanxi	n/a ⁽¹⁾	open pit	December 2010	under development	We are the sole owner of these mines and are conducting research on the development plan of these mines. We are searching for operators for future development.
Shanchuan	Henan	n/a ⁽¹⁾	open pit	April 2011	under development	We are the sole owner of these mines and are conducting research on the development plan of these mines. We are searching for operators for future development.
Yuanping	Shanxi	Yuanpinggao Alumina mine	open pit / underground	December 2007	operational	We established a joint venture with Yuanpinggao Alumina mine, in which we hold 51% equity interest.
Dayu	Shanxi	n/a ⁽¹⁾	open pit	June 2009	under development	We are the sole owner of these mines and are conducting research on the development plan of these mines. We

are searching for operators for future development.

- (1) We have decided to cooperate with other parties to undertake the mining operations in these mines. However, as of December 31, 2009, we had not confirmed any party as our partner.
- (2) All conditions to retain jointly-owned properties or jointly-held leases had been fulfilled as of December 31, 2009.
- (3) As of December 31, 2009, Maige mine had nil bauxite reserve.

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The following table sets forth the specific details of our jointly operated mines as of December 31, 2009.

Mine	Area (km ²)	Total reserves ⁽¹⁾⁽²⁾ (million tonnes)	Average grade (%)		Ratio of average
			Al ₂ O ₃	SiO ₂	A/S ₃
Goujiang	0.27	0.03	64.66	9.91	6.52
Maige	0.19	-	-	-	-
Zhijin	0.96	-	-	-	-
Tuanxi	16.95	-	-	-	-
Wenquanxiang	1.31	5.69	63.48	12.95	4.90
Shangtan	0.67	-	-	-	-
Yangpo	0.78	-	-	-	-
Shaping	1.38	-	-	-	-
Jindui	1.93	1.50	62.23	11.56	5.38
Shicao	0.60	1.32	67.76	10.26	6.60
Nanpo	7.92	0.38	64.96	11.85	5.48
Sunjiata	1.53	0.98	44.36	9.86	4.50
Xishan	3.38	2.20	62.52	11.09	5.64
Niucagou	1.76	2.09	65.98	7.66	8.62
Shanchuan	0.10	0.18	64.59	7.78	8.30
Yuanping	0.79	-	-	-	-
Dayu	0.99	0.75	65.84	10.76	6.12
Total (average)	41.51	15.13	62.86	11.17	5.63

By reserve type				
Proven reserve	3.08	49.70	9.00	5.52
Probable reserve	12.05	66.23	11.73	5.65
	<hr/>	<hr/>	<hr/>	<hr/>
Total (average) reserves	15.13	62.86	11.17	5.63
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- (1) Our reserves take into consideration mining dilution and loss factors, which generally vary from 5% to 10% and is based on the planning mining method and selected drill data for each site.
 - (2) Our metallurgical recovery factors are calculated in accordance with the relevant PRC mining standards and vary from mine to mine.
 - (3) Refers to the ratio of average grade of Al_2O_3 to the average grade of SiO_2 of the reserves.

We are in the process of restructuring our joint mining operations to increase operational efficiency and better align our mining operations with our long-term business strategy. Since the end of 2009, we have initiated discussions to modify or terminated the arrangements governing the operations of a number of mines that were jointly operated as of the end of 2009. We plan to assume the operations of the mines for which we own mining rights and cease procuring bauxite from selected jointly operated mines. We believe that we will maintain a sufficient supply of bauxite from available sources throughout the course of and following the restructuring.

Other Suppliers.

In addition to our own mines and our jointly operated mines, we also source bauxite from other suppliers. A majority of other suppliers are small independent mines. Small independent mines are not affiliated with us and generally have annual bauxite production capacities not exceeding 200,000 tonnes. These mines have historically been an important source of bauxite for our operations. We purchase bauxite directly from small independent mines or through local distributors that procure bauxite from these mines. In addition, we also secure a small portion of bauxite overseas. Bauxite secured from other suppliers accounted for 36.2% of our total bauxite supply in 2009.

Bauxite Procurement.

The mineral resource department at our headquarters is responsible for the oversight and coordination of our supply of bauxite. To determine how our bauxite requirement will be allocated among our principal sources each year, we first estimate our total bauxite needs for the year. Based on market conditions, production costs and other factors, we determine the amount of bauxite that we wish to source from our own mines, and allocate the remaining requirements among the jointly operated mines and other suppliers. Our management or operational control of our own mines and jointly operated mines generally allows us to adjust procurement from these sources during the course of the year to

accommodate changes in our plans or market conditions.

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Alumina-to-Silica Ratio.

The production method for alumina refining is determined by the mineral composition of the bauxite and, in particular, its alumina-to-silica ratio. Most of the bauxite reserves in China are diasporic with low alumina-to-silica ratios. Based on our current technology, an efficient application of the Bayer process requires bauxite with an alumina-to-silica ratio of 10:1 or higher, while the sintering process can refine bauxite with an alumina-to-silica ratio as low as 4:1. The average alumina-to-silica ratio of the proven and probable reserves of our mines ranges from 4:1 to 14:1.

Prices.

There is neither governmental regulation on bauxite prices nor an official trading market for bauxite in China. We negotiate bauxite prices with our suppliers, based on ore quality, mining costs, market conditions, transportation costs and various governmental taxes or levies, including a resource tax imposed by local governments. As we procure bauxite from three different sources, our total bauxite cost is influenced by the following factors:

- * the cost of our mining operations;
- * the terms of our arrangements with respect to our jointly operated mines;
and
- * the market conditions relating to purchases from small independent mines.

The average per tonne purchase price of bauxite from our joint operations and other suppliers in 2007, 2008 and 2009 was RMB288.1, RMB 383.9 and RMB289.2, respectively. The average per tonne cost of bauxite from our own mines during the same periods was RMB228.7, RMB217.3 and RMB174.0, respectively.

We purchase a substantial amount of bauxite to protect the resources at our mines despite having unutilized capacity at these mines. Additionally, to increase the use of bauxite from our mines, we refine all bauxite that meets the minimum technical requirements for our production of alumina. We also purchase higher grade ore from other suppliers and blend the ore of various grades to meet the technical requirements for our alumina production. This practice allows for production flexibility and the inclusion of lower grade bauxite to optimize the use of bauxite deposits available to us. We do not use these prices or any other historical index to estimate our bauxite reserves.

The following table sets forth our capital expenditures for our mines for the periods indicated:

<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
(RMB thousands)				

Capital Expenditures

Infrastructure

construction	50,552.4	550,237.5	450,084.6	468,770.6	489,553.6
Facility upgrade	34,194.0	64,971.4	60,633.4	498,335.2	11,167.5

Total	84,746.4	615,208.9	510,718.0	967,105.8	500,721.1
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Primary Aluminum

We use, on average, approximately 1.9 tonnes of alumina and 14,323 kWh of electricity to produce one tonne of primary aluminum. Alumina and electricity, the two principal cost components in the primary aluminum smelting process, accounted for approximately 34.7% and 42.0%, respectively, of our unit costs of primary aluminum in 2009. Apart from alumina and electricity, we also require carbon anodes, carbon cathodes and sodium fluoride for our smelting operations.

Alumina is the main raw material in the production of primary aluminum. Our Shandong, Henan, Guizhou and Guangxi branches have historically sourced all or substantially all of the alumina required for their primary aluminum production from their respective integrated refineries. Our plants that do not have alumina refining operations onsite obtain alumina internally from our alumina refineries located elsewhere or externally on the market. In 2009, our smelters consumed approximately 6.5 million tonnes of alumina, of which 4.4 million tonnes were produced at our refineries, to produce approximately 3.4 million tonnes of primary aluminum. Our primary aluminum output accounted for 9.1% of global output and 26.5% of the production from China in 2009.

Aluminum Fabrication Products

We use primary aluminum as the main raw material for our aluminum fabrication operations. In addition, we also use other metal raw materials in aluminum fabrication depending on the type of products. We meet the primary aluminum requirements of our aluminum fabrication segment with primary aluminum supplied by our own aluminum smelters. In addition, Chalco Qingdao and Chalco Nanhai use recycled aluminum materials to produce aluminum fabrication products. In 2008, we acquired five aluminum fabrication plants from Chinalco and China Nonferrous Metals Technology, which increased our annual aluminum fabrication capacity significantly. Our annual aluminum fabrication capacity further increased to approximately 1.3 million tonnes as of December 31, 2009.

Supplemental Materials, Electricity and Fuel

The procurement department at our headquarters coordinates and manages our supply chain for all our major raw materials in conjunction with the distribution center at each production facility, which manages the logistics and inventory of raw materials locally. We are able to purchase diesel, the main fuel used by our mining and manufacturing equipment, from the public markets, and we source our water from local rivers, lakes or underground

sources.

Alumina

Electricity, coal, alkali (caustic soda or soda ash) and heavy oil are the principal materials used in our alumina production. Electricity is one of the principal cost components in our refining process. We generate electricity at a number of production facilities and purchase our remaining electricity requirement from regional power grids at government-mandated rates. Most of our power supply plans are one to three year renewable plans. Power prices in China can vary, sometimes substantially, from one region to another, based on demand and power production costs in the region, and electricity costs at our various alumina refineries vary accordingly.

Large quantities of coal are used as a reducing agent and as fuel to produce steam and gas in the alumina refining process. Alkali is also used as a supplemental material in alumina refining. The sintering process and the hybrid Bayer-sintering process require soda ash while caustic soda is used in the Bayer process. Fuel oil is required to refine alumina, and most of our refineries use heavy oil. There is no governmental regulation on the prices of coal, alkali or fuel. We purchase these raw materials from third-party suppliers under negotiated supply contracts, which we believe are competitively priced. We have not experienced difficulty in obtaining these materials in sufficient quantity and at acceptable prices.

Primary Aluminum

Smelting primary aluminum requires a substantial and continuous supply of electricity. In 2009, we consumed 50.8 billion kWh of electricity for our primary aluminum production. The availability and price of electricity are key factors in our primary aluminum production. Electricity costs have fluctuated in recent years due to periodic shortages of electricity in China, cyclical demand and government policies to regulate key industries. See "Item 5. Operating and Financial Review and Prospects - Factors Affecting Our Results of Operations - Electricity Costs".

Except for five of our smelters that have entered into direct purchase agreements with power generation enterprises, we purchase electricity from the regional power grids at prices set by the government. Industrial users within each region are generally subject to a common electricity tariff schedule. However, prices vary, sometimes substantially, across regions. We believe our power supply from regional grids is generally not reliant upon any particular generation facility supplying the grid. Electricity purchased from different power grids is subject to different tariff levels in 2009. The average electricity cost of our smelters was RMB0.384/kWh in 2009.

Carbon anodes and cathodes are key raw materials in the smelting process. Each of our smelters is able to produce carbon products necessary for its operations other than carbon cathodes. All of our carbon cathodes are supplied by our Guizhou branch, which is our only production facility that produces carbon cathodes. The Guizhou branch also sells carbon cathodes to third-party smelters in China.

Sales and Marketing

We coordinate our major sales and marketing activities at our corporate headquarters, which are carried out by our network of branch offices. We set uniform prices for our alumina products and set minimum prices for primary aluminum products in each region where our primary aluminum products are sold. Our subsidiaries and branches also play an important role in providing after-sales services and strengthening our presence in the market.

For sales of aluminum fabrication products, we generally extend credit terms to our customers with whom we have established long-term relationships to permit them to settle payment after the delivery of our products. We require our customers to make prepayments and deposits for purchases of alumina and primary aluminum. As of December 31, 2009, the balance of deposits and prepayments that we had received was RMB989.7 million.

Alumina

We sell a portion of our alumina output to third-party customers and consume the remaining portion in our aluminum smelting operations. In 2009, we used approximately 6.5 million tonnes of alumina, which included alumina that we produced and alumina that we purchased from the market. All of our alumina chemical products are sold to third-party customers.

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We coordinate external sales of alumina at our corporate headquarters. In the fourth quarter of each year, we host a national sales conference for our customers for alumina in China at which we form a significant majority of our sales contracts. After reserving sufficient alumina for our forecast internal use, we offer our remaining alumina for sale, giving priority to customers with whom we have long-standing relationships and who have established a strong credit history.

We sell our alumina to smelters throughout China. All of our major customers in the past three years have been domestic smelters. Our alumina contracts are supply contracts that generally set forth the sales volume and delivery terms, but leave prices open to be determined at or near the time of delivery at the then prevailing market price. If an agreement on price cannot be reached near the time of delivery, our customer may refuse to accept delivery pursuant to the terms of the supply contract. Since 2004, we have gradually entered into three to five-year sales contracts for alumina, which accounted for approximately 83.7% of our external sales volume in 2009. Our other alumina contracts are for a term of one year.

We set, and adjust as necessary, uniform sale prices for alumina produced by all of our refineries that we sell on the spot market under one-year contracts. In 2009, our highest and lowest spot price of domestic alumina was RMB2,700 per tonne and RMB1,800 per tonne, respectively. We set the price for our external sales of alumina by reference to alumina prices at reference markets and taking into account the following considerations:

- * alumina imports into China, CIF Chinese ports;
- * international transportation costs;
- * our short-term and mid-term projections for alumina supply and demand;
- * the 17% value-added tax applicable to our products;
- * import related fees; and

- * domestic supply and demand.

The international practice for pricing alumina under long-term contracts is by reference to the LME prices for primary aluminum. Since 2004, we have entered into a number of domestic long-term alumina sales contracts, under which the sales price is set as a percentage of the three-month primary aluminum prices on the Shanghai Futures Exchange. As a result, fluctuations of primary aluminum prices on the Shanghai Futures Exchange affect alumina prices under our long-term contracts

Primary Aluminum

We sell a majority of our primary aluminum output to third-party customers and the remaining portion to our own aluminum fabrication plants. In 2009, we sold approximately 3.4 million tonnes of primary aluminum.

We sell our primary aluminum through two channels:

- * Contract sales. Most of our primary aluminum sales are made pursuant to contracts entered into directly with our long-standing customers. These may be long-term or short-term contracts.
- * Sales on the Shanghai Futures Exchange. As part of our effort to manage market risk, we sell a portion of our primary aluminum products on the Shanghai Futures Exchange through futures contracts of one to six month terms to hedge against declines in primary aluminum prices.

We hold an annual regional primary aluminum sales conference in the fourth quarter of each year to procure sales and plan production for the following year. We also conduct sales on the Shanghai Futures Exchange from our headquarters.

To improve the efficiency of our distribution, we divide our China market into several regions as follows:

- * southern China (including Guangdong and Fujian Provinces);
- * eastern China (including Jiangsu and Zhejiang Provinces and Shanghai Municipality);
- * southwestern China (including Sichuan Province and Chongqing Municipality);
- * the Beijing-Tianjin-Tanggu area; and
- * northeastern China (including Heilongjiang Province).

We sell substantially all of our primary aluminum to domestic customers. We expect China to remain our key market for primary aluminum for the foreseeable future. Although we have conducted export sales in the past, all of our external sales of primary aluminum in 2009 were domestic sales. Customers of our primary aluminum products principally consist of aluminum fabricators and distributors that resell our primary aluminum products to aluminum fabricators or other purchasers.

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We establish pricing guidelines for domestic sales of our own primary aluminum products, taking into account three main factors: the primary aluminum spot prices on the Shanghai Futures Exchange, our production costs and expected profit margins, and supply and demand. As part of our efforts to coordinate and centralize sales, we set minimum prices with respect to each region in China where our primary aluminum is sold. These minimum prices are determined by reference to the Shanghai Futures Exchange spot price for primary aluminum, exclusive of transportation costs. The smelters filling a particular order is generally responsible for negotiating the pricing and delivery terms and must comply with the minimum pricing guidelines unless it obtains prior approval from our headquarters. In general, we satisfy each purchase order with products from our nearest smelter to minimize transportation costs.

Aluminum Fabrication Products

We produce aluminum fabrication products based on market demand and sell all of our aluminum fabrication products to third-party customers. In 2009, we sold approximately 0.4 million tonnes of aluminum fabrication products. Historically, we sold most of our aluminum fabrication products domestically and a small portion overseas. In 2009, we sold all our aluminum fabrication products domestically. We extend credit terms for sales of aluminum fabrication products, requiring payment within a short period after delivery. The prices for our aluminum fabrication products are set by agreement with our customers.

Alumina Chemical Products and Gallium

Alumina chemical products and gallium are derived from our alumina production. We adjust our production of these products based on market demand. We sell all of our alumina chemical products and gallium to third-party customers, mostly in China but also internationally. Prices for our alumina chemical products and gallium are set according to market demand or by agreement with our customers. Our total sales of gallium in 2007, 2008 and 2009 amounted to RMB171.6 million, RMB197.8 million and RMB58.1 million, respectively.

Delivery

We rely on rail shipping and trucking for the delivery of products within China. Our alumina is transported by rail or truck, and transportation costs are generally borne by the customer and excluded from our sales price. For long-distance deliveries, we maintain spur lines connecting our plants to the national railway system. The price of rail shipping on the PRC national railway system is fixed by the government.

Our primary aluminum products are transported mostly by rail. In view of the substantial distance between our smelters and aluminum fabrication plants, most of which are concentrated in southern and eastern China, we maintain

facilities (often with warehousing capacity leased from third parties) in major cities in eastern and southern China to facilitate and coordinate deliveries.

Our customers are generally responsible for arranging and bear the associated costs with transporting aluminum fabrication products from our production facilities.

Principal Facilities

Our principal facilities include 17 principal production plants and our Research Institute. Set forth below is a description of our principal production plants. Our production is organized and managed according to our three business segments: alumina, primary aluminum and aluminum fabrication.

Guangxi Branch

The Guangxi branch commenced operations in 1994 and is located in the Guangxi Zhuang Autonomous Region in southwestern China, an area rich in bauxite reserves. The Guangxi branch receives bauxite delivered via highway from the Pingguo mine, one of our wholly-owned mines, located less than 17 kilometers from the Guangxi branch.

The Pingguo mine contains large, easily exploitable bauxite reserves with high alumina-to-silica ratios. The Guangxi branch is our only principal refinery that uses the Bayer process exclusively. With technology and production equipment imported from Europe, our Guangxi refinery features a high level of automation and energy efficiency. Since its inception, we have continually increased the designed production capacity at this branch by removing production bottlenecks and investing in capacity expansions. As of December 31, 2009, the Guangxi branch had an annual production capacity of 1,730,000 tonnes of alumina. In 2009, the Guangxi branch produced approximately 1,900,200 tonnes of alumina, exceeding its production capacity due to the high quality bauxite ore in its proximity, along with approximately 113,200 tonnes of alumina chemical products. Most of the alumina output at the Guangxi branch is used in the primary aluminum smelter at the same branch and the remainder is sold to third-party smelters.

Our Guangxi branch also uses 160 kA and 320 kA pre-bake reduction pot-lines developed by us in its smelting operations. As of December 31, 2009, the branch's primary aluminum production capacity reached 139,500 tonnes per annum. In 2009, our Guangxi branch produced approximately 103,000 tonnes of primary aluminum.

Guizhou Branch

The Guizhou branch commenced its aluminum smelting operations in 1966 and was subsequently expanded to include alumina refining operations in 1978. Our alumina refinery at this branch is one of the most advanced alumina refineries in China, having imported many of its key technologies and equipment. The Guizhou refinery uses the hybrid Bayer-sintering process to refine bauxite supplied from our own mines as well as third-party suppliers into alumina. Bauxite from our own mines is delivered by cable cars and train. The alumina produced at the Guizhou branch is mostly used in the smelting operations at the same plant and the remainder is sold to third-party smelters. In addition, our Guizhou branch uses 160 kA, 186kA and 230 kA pre-bake reduction pot-lines in its primary aluminum

production. As of December 31, 2009, our Guizhou branch had annual alumina production capacity of approximately 1.2 million tonnes and annual primary aluminum production capacity of approximately 403,700 tonnes respectively. In 2009, our Guizhou branch produced approximately 1,172,300 tonnes of alumina, 4,300 tonnes of alumina chemical products and 370,000 tonnes of primary aluminum respectively.

Our Guizhou branch also contains a modern carbon production facility, which produces carbon cathodes in addition to carbon anodes. As the Guizhou branch is our only facility that produces carbon cathodes, it supplies carbon cathodes to our other facilities. Its carbon cathodes are also sold to third-party customers throughout China.

Henan Branch

Located in Henan Province, a province rich in bauxite reserves, the Henan branch commenced its refining and smelting operations in 1966 and 1967, respectively. Bauxite is delivered to our Henan branch via railway and highway from the following mines: Xiaoguan mine located in Zhengzhou, Luoyang mine in Luoyang, Mianchi mine in Mianchi, Xuchang mine in Zhengzhou, Sanmenxia mine in Sanmenxia and Jiaozuo mine in Jiaozuo. Our Henan branch was the first refinery in China to develop the hybrid Bayer-sintering process. We also have alumina production line that uses the ore-dressing Bayer process, which we developed to refine low alumina-to-silica ratio bauxite. Since its inception, the Henan branch's production facilities have undergone substantial technological upgrades, based on equipment imported from Germany and Denmark. The refinery has also benefited from its access to high alumina-to-silica ratio bauxite from our own mines and through purchases on the market. Its alumina output is first used to satisfy its primary aluminum production, and the remainder is sold to our other smelters and third-party customers. The annual production capacity of alumina of our Henan branch was 2,050,000 tonnes as of December 31, 2009. In 2009, our Henan branch produced approximately 1,250,000 tonnes of alumina and 23,000 tonnes of alumina chemical products.

We have upgraded a portion of the primary aluminum facilities at this branch, which now utilizes 85 kA pre-bake reduction pot-lines. Its carbon plant produces high quality carbon products that are sold in China and abroad after meeting the needs of our smelting operations at various sites. As of December 31, 2009, the annual primary aluminum production capacity of our Henan branch reached 56,000 tonnes. In 2009, our Henan branch did not produce any primary aluminum.

Shandong Branch

The Shandong branch commenced operations in 1954 and has the capacity to produce both alumina and primary aluminum. The alumina refinery of our Shandong branch was China's first alumina production facility. It produces the majority of its alumina through the sintering process, but has an ore-dressing sintering operation. The Shandong branch purchases the majority of the bauxite required for its production from small third-party mines located in Henan province and Shanxi Province. In addition, our Shandong branch also obtain supply of bauxite from the Yangquan mine in Shanxi Province delivered via railway and highway. Its alumina output is first used to satisfy its own primary aluminum production, and the remainder is sold to our other smelters as well as third-party customers. As of December 31, 2009, the annual production capacity of our Shandong branch reached 1,500,000 tonnes of alumina and it produced approximately 768,800 tonnes of alumina in 2009.

In addition, our Shandong branch produces substantial amounts of alumina chemical products and produced approximately 615,900 tonnes of alumina chemical products in 2009. It is the largest and most technologically advanced alumina chemical products production facility in China with the ability to produce the widest variety of alumina chemical products. Alumina chemical products produced by our Shandong branch are used domestically and

internationally in the pharmaceutical, ceramics, construction materials and other industries.

Our Shandong branch's primary aluminum operations have undergone technological and equipment upgrades. As of December 31, 2009, the annual primary aluminum production capacity of our Shandong branch reached 75,000 tonnes and it produced approximately 21,200 tonnes of primary aluminum in 2009.

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Qinghai Branch

Located in Qinghai Province, our Qinghai branch commenced operations at its a stand-alone primary aluminum production facility in 1987. It operates 160 kA automated pre-bake anode reduction pot-lines that were developed domestically. The Qinghai branch benefits from relatively low electricity costs in Qinghai Province due to the hydroelectric power stations in the region. The Qinghai branch sources alumina from our Shanxi, Shandong, Henan and Zhongzhou branches, but incurs higher transportation costs for both raw materials and its primary aluminum products than our other branches and subsidiaries. The Qinghai branch produced approximately 387,500 tonnes of primary aluminum in 2009, slightly exceeding its designed annual production capacity of 367,000 tonnes as of December 31, 2009.

Shanxi Branch

Our Shanxi branch commenced operations in 1987 and is located in Shanxi Province, a province rich in bauxite deposits. Bauxite is transported to our Shanxi branch via railway and highway from Xiaoyi mine in Shanxi Province and third-party suppliers. Our Shanxi branch is a stand-alone alumina plant and is currently China's largest alumina refinery in terms of production capacity, with an annual production capacity of 2,217,000 tonnes as of December 31, 2009. Our Shanxi branch produced approximately 1,273,600 tonnes of alumina and 28,900 tonnes of alumina chemical products in 2009. Most of the equipment used in the Shanxi branch was imported. Due to its proximity to large coal mines and substantial water resources, our Shanxi branch currently has the largest power generation capacity among our alumina manufacturing facilities.

Zhongzhou Branch

Located in Henan Province with easy access to abundant bauxite, coal and water supplies, our Zhongzhou branch is a stand-alone alumina plant. It commenced operations in 1993 and is equipped with imported and self-developed technology and has undergone various improvements and upgrades, in particular to its sintering process. The Zhongzhou branch sources its bauxite supplies from Henan and Shanxi Province. Its production capacity reached 2,030,000 tonnes of alumina per annum as of December 31, 2009. The Zhongzhou branch produced approximately 1,411,900 tonnes of alumina and approximately 239,300 tonnes of alumina chemical products in 2009.

Lanzhou Branch

Located in Lanzhou city in Gansu Province, our Lanzhou branch is a stand-alone primary aluminum plant. It was part of Lanzhou Aluminum before July 2007 which was acquired by us through share exchange in April 2007. In July

2007, Lanzhou Aluminum was divided into two wholly-owned entities: Lanzhou branch and Northwest Aluminum. Our Lanzhou branch owns a primary aluminum smelting plant with an annual production capacity of approximately 428,000 tonnes as of December 31, 2009. It produced approximately 420,300 tonnes of primary aluminum in 2009.

Jiaozuo Wanfang

Jiaozuo Wanfang is situated in Jiaozuo city in Henan Province and is a stand-alone primary aluminum plant. Jiaozuo Wanfang was established in 1993. In May 2006, we acquired 29% of the issued share capital and became its largest shareholder. In 2008, we obtained de facto control over Jiaozuo Wanfang and accordingly, it became our subsidiary. Jiaozuo Wanfang had an annual production capacity of 412,000 tonnes of primary aluminum as of December 31, 2009 and produced approximately 420,700 tonnes of primary aluminum in 2009.

Shanxi Huaze

Shanxi Huaze is situated in Shanxi Province. In March 2003, we established the joint venture company, Shanxi Huaze, with Zhangze Electric Power to commence the construction of a primary aluminum production facility. Following the completion of its capacity expansion in June 2008, Shanxi Huaze's annual production capacity of primary aluminum reached 350,000 tonnes as of December 31, 2009 and it produced approximately 293,400 tonnes of primary aluminum in 2009. We currently hold 60% of the equity interest of Shanxi Huaze.

Shanxi Huasheng

Shanxi Huasheng is situated in Shanxi Province. In December 2005, we entered into a joint venture agreement with Guan Lv, to establish a joint venture company, Shanxi Huasheng. The joint venture company commenced operations in March 2006. Its annual production capacity of primary aluminum reached approximately 220,000 tonnes as of December 31, 2009. In 2009, Shanxi Huasheng produced 227,400 tonnes of primary aluminum. The joint venture company has a total investment of RMB2,379.4 million and a registered capital of RMB1,000 million, of which we committed RMB510 million. We currently hold 51% of the equity interest in Shanxi Huasheng.

Zunyi Aluminum

Zunyi Aluminum is situated in Guizhou Province. In June 2006, we entered into a share purchase agreement with Guizhou Wujiang Hydropower Development Co., Ltd. and eight other companies, which were the shareholders of Zunyi Aluminum, to purchase part of the equity interest from Guizhou Wujiang Hydropower Development Co., Ltd. and all the equity interest held by the other eight companies. We have completed our purchase and currently hold 62.10% of the equity interest in Zunyi Aluminum. The annual primary aluminum production capacity of Zunyi Aluminum reached 235,000 tonnes as of December 31, 2009 and it produced approximately 144,800 tonnes of primary aluminum in 2009.

Fushun Aluminum

Fushun Aluminum is situated in Liaoning Province, and is a stand-alone primary aluminum plant. In March 2006, we entered into a share transfer agreement with Liaoning Fushun Aluminum Plant to acquire 100% of the equity interests in Fushun Aluminum for a consideration of RMB500 million. Fushun Aluminum's primary business is the production of primary aluminum and carbon products. With the partial completion of a primary aluminum project at the end of 2008, which increased the primary aluminum production capacity of Fushun Aluminum by 100,000 tonnes, the annual primary aluminum production capacity of Fushun Aluminum reached 240,000 tonnes as of December 31, 2009 and it produced approximately 76,400 tonnes of primary aluminum in 2009.

Shandong Huayu

Shandong Huayu is situated in Shandong Province and is a stand-alone primary aluminum plant. In July 2006, we entered into a share transfer agreement with Shandong Huasheng Jiangquan Group to acquire 55% of the equity interest of Shandong Huayu, a subsidiary of Shandong Huasheng Jiangquan Group. After the completion of its expansion plan in 2008, Shandong Huayu's annual primary aluminum production capacity reached 200,000 tonnes as of December 31, 2009. It also has supporting facilities and two 135MW coal-fired generators. In 2009, Shandong Huayu produced approximately 156,200 tonnes of primary aluminum.

Gansu Hualu

Gansu Hualu is situated in Gansu Province, and is a stand-alone primary aluminum plant. In August 2006, we entered into a share transfer agreement with Baiyin Nonferrous Metal (Group) Co., Ltd. ("Baiyin Nonferrous") and Baiyin Ibis Aluminum Co., Ltd. ("Baiyin Ibis"). Baiyin Nonferrous contributed 127,000 tonnes of primary aluminum smelting and supporting facilities owned by Baiyin Ibis as capital contribution and holds a 49% equity interest in Gansu Hualu, a subsidiary of Baiyin Ibis, and we hold 51% of the equity interest in Gansu Hualu. The joint venture had an annual production capacity of 160,000 tonnes of primary aluminum as of December 31, 2009 and it produced approximately 156,700 tonnes of primary aluminum in 2009.

Baotou Aluminum

Baotou Aluminum is located in Inner Mongolia Autonomous Region, and is a stand-alone primary aluminum plant. On December 28, 2007, through A Shares issuance and exchange for Baotou Aluminum shares, we acquired 100% of the equity interest of Baotou Aluminum. Baotou Aluminum had an annual production capacity of 388,000 tonnes as of December 31, 2009 and it produced approximately 400,500 tonnes of primary aluminum.

Liancheng branch

Liancheng branch is located in Gansu Province. In late May 2008, we acquired 100% of the equity interest of Liancheng Longxing Aluminum Company Limited from Chinalco on the China Beijing Equity Exchange and subsequently transformed it into our Liancheng branch, which specializes in producing primary aluminum. As of December 31, 2009, Liancheng branch had an annual primary aluminum production capacity of approximately 270,000 tonnes and it produced approximately 240,600 tonnes of primary aluminum in 2009.

Chalco Qingdao

Located in Qingdao, Shandong Province, Chalco Qingdao specializes in producing aluminum fabrication products from recycled aluminum. As of December 31, 2009, Chalco Qingdao had an annual production capacity of 120,000 tonnes aluminum fabrication products and it produced 13,700 tonnes of aluminum fabrication products in 2009.

Northwest Aluminum

Northwest Aluminum is an aluminum fabrication plant situated in Lanzhou city in Gansu Province. It was part of Lanzhou Aluminum before July 2007, which we acquired through share exchange in April 2007. In July 2007, Lanzhou Aluminum was divided into two wholly-owned entities: Lanzhou branch and Northwest Aluminum. Northwest Aluminum had an annual production capacity of approximately 100,000 tonnes of aluminum fabrication products as of December 31, 2009 and it produced approximately 43,300 tonnes of aluminum fabrication products in 2009. Northwest Aluminum has undertaken an expansion plan which is expected to be completed in 2010 and we expect the completion of this project to increase Northwest Aluminum's aluminum fabrication capacity by 35,000 tonnes.

Chalco Ruimin

Located in Fujian, Chalco Ruimin commenced the production of aluminum fabrication products in 1996. We currently hold 90.12% of the equity interest in Chalco Ruimin. As of December 31, 2009, Chalco Ruimin had an annual aluminum fabrication production capacity of approximately 270,000 tonnes and it produced approximately 86,200 tonnes of aluminum fabrication products. Chalco Ruimin has undertaken an expansion plan, which is expected to be completed in 2010. We expect the completion of this project to increase Chalco Ruimin's aluminum fabrication capacity by 100,000 tonnes.

Huaxi Aluminum

Located in Chengdu, Sichuan Province, Huaxi Aluminum commenced the production of aluminum fabrication products in 1997. In late May 2008, we purchased 56.86% of the equity interest of Huaxi Aluminum from Chinalco on the China Beijing Equity Exchange. As of December 31, 2009, Huaxi Aluminum had an annual aluminum fabrication production capacity of 22,000 tonnes and it produced approximately 13,400 tonnes of aluminum fabrication products in 2009.

Chalco Southwest Aluminum

Established in September 2004 and located in Chongqing, Chalco Southwest Aluminum specializes in aluminum fabrication. On May 30, 2008, we purchased 60% of the equity interest of Chalco Southwest Aluminum from Chinalco on the China Beijing Equity Exchange. As of December 31, 2009, Chalco Southwest Aluminum had an annual aluminum fabrication production capacity of approximately 350,000 tonnes and it produced approximately 159,200 tonnes of aluminum fabrication products in 2009.

Henan Aluminum

Established in August 2005 and located in Luoyang, Henan Province, Henan Aluminum specializes in aluminum fabrication. In late May 2008, we acquired 84.02% of the equity interest of Henan Aluminum from Chinalco and China Nonferrous Metals Technology on the China Beijing Equity Exchange. As of December 31, 2009, Henan Aluminum had an annual aluminum fabrication production capacity of approximately 355,000 tonnes and it produced approximately 96,900 tonnes of aluminum fabrication products in 2009. We currently hold 90.03% of the equity interest in Henan Aluminum.

Chalco Nanhai

Established in June 2007 and located in Foshan, Chalco Nanhai specializes in aluminum fabrication. Following the completion of its construction project in December 2009, Chalco Nanhai had an annual aluminum fabrication production capacity of approximately 110,000 tonnes. In 2009, Chalco Nanhai did not produce any aluminum fabrication products.

Research Institute

Established in August 1965 and located in Zhengzhou, Henan Province, the Research Institute specializes in the research and development of technology for smelting aluminum. It is the only research institute in China dedicated to light metals research and has played a key role in bringing about technological innovations in China's aluminum industry. The Research Institute is central to our research and development efforts. The Research Institute operates test facilities, which produce alumina chemical products and primary aluminum. The Research Institute was approved by the Ministry of Science and Technology of the PRC in 2003 to establish the National Research Center of Aluminum Refinery Technologies and Engineering. Our Research Institute has a limited alumina and primary aluminum production capacity, which it uses in connection with its research and development efforts.

Competition

Alumina

We are the largest producer of alumina in China, we believe that we will not face significant competition from domestic alumina producers in the short-term for the following reasons:

- * a new producer would need access to a substantial and stable supply of bauxite as well as approval from the relevant departments under the State Council of China;
- * we are experienced in alumina production and our production technologies are specifically adapted to the particular chemical composition of bauxite found in China;

*

we have strong capacity in technology research and hold certain proprietary technologies and patents;

- * our substantial workforce that has extensive experience in production and management; and
- * we enjoy strong government support under state policy.

In order to improve the efficiency and competitiveness of the Chinese alumina industry as well as to protect the environment, the National Development and Reform Commission of China ("NDRC") published "Entrance Conditions for Aluminum Industry" (the "Entrance Conditions") in November 2007. According to the Entrance Conditions, new bauxite projects must be approved by the provincial authority or the relevant department of the State Council of China depending on the amount of total investment, and any new alumina project must be approved by the relevant department of the State Council of China. The Entrance Conditions also provide detailed requirements for capital size, service period and resource utilization rate for a new bauxite or alumina project to be approved. The Entrance Conditions has established a high entry barrier for new alumina producers in China.

We believe that we have competitive advantages over our foreign competitors in the China alumina market. As a local supplier situated in proximity to our customers, we do not incur international transportation and import-related costs and enjoy stable long-term relationships with our customers in a vast and growing market. However, we expect to face increasing competition from international alumina suppliers as the standard tariff on imports of alumina and bauxite into China has been eliminated. In addition, the elimination of the standard tariff on imports of bauxite may also reduce the production costs of alumina producers in China that source significant portions of their bauxite supplies from overseas.

Primary Aluminum

We derived all of our primary aluminum revenue from domestic sales in 2009. Our competitors include other domestic and international primary aluminum producers that conduct sales in China. In 2009, our primary aluminum production represented approximately 26.5% of total domestic production.

There are approximately 115 primary aluminum smelting companies operating in China, which sell substantially all of their products in China. We are the largest integrated alumina and primary aluminum producer in China. Currently, only 17 primary aluminum producers in China (including Chalco) have annual production capacities of 300,000 tonnes or more, which in aggregate represent approximately 66% of the total primary aluminum production capacity in China. Only ten primary aluminum producers in China (including Chalco) have annual production capacity of 500,000 tonnes or more. The PRC government is encouraging consolidation within the Chinese primary aluminum industry to create more efficient producers that are better positioned to implement measures to reduce emissions. Accordingly, the larger smelters are granted preferential treatment, including priority in the allocation of raw materials and electricity, which give them a competitive advantage over small domestic smelters. Moreover, according to the Entrance Conditions, effective from 2007, new aluminum projects must secure a supply of alumina before seeking approval from the relevant department of the State Council of China. As of the date of the annual report, the relevant department of the State Council is not expected to approve any new aluminum projects except projects to enhance environmental protection and projects planned by the state to update outdated equipment.

Although we face competition from other large domestic smelters, we have several advantages over such competitors, including:

* Scale of production

. With 17 primary aluminum facilities including our research institute, we can achieve significant economies of scale. In addition, our scale of production enables us to achieve high production volumes to fill large customer orders and maintain a large customer base. Through our national distribution network, we are able to make timely deliveries to customers from our local warehouses.

* Technology

. We believe we have more sophisticated and efficient technology than most of our domestic competitors. In addition, our technological support and research and development capabilities are superior to those of other domestic smelters.

* Vertical integration

. As the largest integrated alumina and primary aluminum producer in China, we are able to supply alumina internally to our primary aluminum plants. As a result, we save on transportation, warehousing and related costs. In addition, because we operate our own alumina refineries, we have access to a stable supply of alumina for our primary aluminum smelting operations.

* Quality

. The quality of our primary aluminum is generally higher than that of the primary aluminum produced by most of our domestic competitors. The primary aluminum produced by most of our smelters satisfies the quality standards of the London Metal Exchange.

Aluminum Fabrication Products

We derived all of our aluminum fabrication products revenue from sales in China. Our competitors include other domestic and international producers of aluminum fabrication products that conduct sales in China. There are approximately 1,100 aluminum fabrication producers in China with an aggregate annual capacity of approximately 20.0 million tonnes as of the end of 2009. In 2009, domestic aluminum fabrication producers in China produced approximately 16.5 million tonnes of aluminum fabrication products.

International Competition

The tariff rate for alumina and primary aluminum imports was eliminated on January 1, 2008 and August 1, 2007, respectively. In 2009, China imported approximately 5.14 million tonnes of alumina, representing a 12.2% increase from 2008. China had net import of approximately 1.45 million tonnes of primary aluminum in 2009, which represented a significant increase from 2008. Competition from international suppliers of alumina and primary aluminum is expected to increase. Such international competitors are likely to be large international companies. Some international competitors may also consider establishing joint venture companies with local producers in China to gain access to the resources in China and lower transportation costs. However, we expect to continue benefitting from PRC governmental policies that promote the growth of large domestic smelters.

Research and Development

Our research and development efforts over the years have facilitated the expansion of our production capacity and reduced our unit costs. We have successfully commercialized our previous research and development results in various technologies. We completed 96 technological projects, including 40 technology development projects, 28 industrialization, promotion and application of advanced technologies projects and 28 basic application projects. Our development and industrialization of Zero-AE and low Energy Consumption Aluminum Electrolysis Technology in aluminum production was awarded the second national prize for technology development in 2009. We filed a total of 250 patent applications in 2009.

As of December 31, 2009, we owned 745 patents, which were primarily related to technologies and know-how, equipment and new products. Once registered, a patent in China for a new invention is valid for 20 years and for a new function or a new design, 10 years from the date of the patent application.

As of December 31, 2009, we owned 36 trademarks, each of which has a term of 10 years. We have entered into a trademarks license agreement with Chinalco for the non-exclusive use by Chinalco of two of our trademarks relating to aluminum fabrication.

We do not regard any single patent, license, or trademark to be material to our sales and operations as a whole. We have no material patents, licenses, or trademarks that cannot, in the judgment of our management, be extended as necessary. We are neither involved in any material intellectual property disputes against us nor are we pursuing any legislation relating to intellectual property rights against any party.

Environmental Protection

Our operations are subject to a wide variety of PRC national and local environmental laws and regulations, including those governing waste discharge, generation, treatment and disposal of hazardous materials, land reclamation, air and water emissions and mining matters. For example, the PRC government has set discharge standards for emissions to air and water. To enforce these standards, national environmental protection authorities have imposed discharge fees that increase for each incremental amount of discharge up to the limit set by regulation. The relevant PRC government agencies are authorized to order any operations that exceed discharge limits to take remediation measures, which are subject to the relevant agency's approval, or order the closure of any operations that fail to comply with applicable regulations.

The pollutants discharged from our alumina refining process include red mud, waste water and gas emissions and dust. Our primary aluminum production process generates fluorides, pitch fume and dust. The discharge of these pollutants must comply with national and local discharge limits. Each of our alumina refineries and primary aluminum smelters has its own waste treatment facilities onsite or has developed other methods to dispose of

industrial waste in compliance with applicable environmental laws and regulations. We have been granted ISO 14001 accreditations issued by the International Certification Network.

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We have increased our energy-efficiency by implementing new production techniques and technologies, upgrading our production facilities, optimizing our production process and enhancing our logistics and operations management. Through these efficiency initiatives, we estimate that we conserved the energy equivalent of 1.45 million tonnes of standard coal in 2009. We have incorporated clean technology and processes into our operations with a view to promoting the concept of "zero emission" plants. In 2009, we invested a total of RMB455.0 million on 11 waste water treatment projects and have nearly achieved our target of zero waste water emission.

Our total expenditures for maintaining compliance with environmental laws and regulations were RMB533.0 million, RMB629.0 million and RMB1,395.0 million for 2007, 2008 and 2009, respectively. We believe that our operations are substantially in compliance with currently applicable national and provincial environmental regulations.

Insurance

We maintain insurance coverage on our property, plant and equipment, in particular for our transportation vehicles and assets that we consider to be subject to significant operating risks. We also have limited coverage for natural disaster such as typhoons, tornados, floods, landslides and lightning. However, there are certain types of losses, such as losses from war, acts of terrorism and natural disasters such as earthquakes, for which we cannot obtain insurance at a reasonable cost or at all.

We are covered under the injury and accidental death insurance provided by the local government labor departments and do not separately maintain coverage for such risks. Consistent with what we believe to be the customary practice in China, we generally do not carry any third-party liability insurance to cover personal injury, environmental damage arising from accidents arising from property or related to our operations (other than our automobiles) or business interruption insurance. More extensive insurance is either unavailable in China or would impose a cost on our operations that would reduce our competitiveness.

We paid a total of RMB62.4 million, RMB68.6 million and RMB81.4 million in insurance premiums in 2007, 2008 and 2009, respectively.

Seasonality

Our business is not subject to seasonality.

Regulatory Overview

Producers of alumina and primary aluminum are subject to national industrial policies and relevant laws and regulations in areas of environmental protection, import and export, land use, foreign investment regulation and taxation. We are also subject to regulations relating to activities such as mining.

We are principally subject to governmental supervision and regulation by two agencies of the PRC government:

- * the NDRC, which sets and implements the major policies concerning China's economic and social development, approves investments exceeding certain amounts, coordinates and improves the reform of the economic system, and formulates industrial policies and investment guidelines for all industries including the aluminum industry; and
- * the Ministry of Land and Resources of the People's Republic of China, which has the authority to grant land use licenses and mining rights permits.

The following is a brief summary of the principal laws, regulations, policies and administrative directives to which we are subject.

Requirements for Capital Investments

Any capital markets financing activities by an enterprise or company incorporated in the PRC, for example, those to finance capital projects, are subject to approval by securities regulatory authorities and other relevant authorities in China, regardless of whether the funds are raised in China or on the international capital markets. An issuer incorporated in the PRC must obtain prior approval from the CSRC for issuance of equity securities or equity-linked securities. Offerings of bonds in the PRC by a listed company PRC-incorporated are subject to approval from the CSRC, while offering of bonds in the PRC by other enterprises are subject to approval from the People's Bank of China, as well as the NDRC, or their competent local authorities. Offering of bonds outside the PRC are subject to approval from the NDRC and/or the State Administration of Foreign Exchange. For all international financing activities through issuance of bonds, the issuer must register with the administrative authorities of foreign exchange. Foreign investment in the exploring and mining of alumina and primary aluminum is permitted by the PRC government.

Entrance Conditions for Aluminum Industry

The "Entrance Conditions for Alumina Industry" provides that, (i) all new bauxite projects must be approved by relevant authorities at the provincial governments, with an exception for those projects with a total investment over RMB500 million, for which the approval from the competent authority under the State Council is required. In addition, all new bauxite projects should have an annual production capacity of not less than 300,000 tonnes with a service period of over 15 years; (ii) all new alumina projects must obtain approval from the State Council. Alumina projects that consume domestic bauxite mines must have an annual production capacity of over 800,000 tonnes and the service duration of bauxite mines must exceed 30 years. Alumina projects which consume imported bauxite mines must have an annual production capacity of over 600,000 tonnes and have reliable supply of bauxite. Raw materials supplied under long-term purchase agreements with terms of over five years must exceed 60% of the total raw material demand; (iii) all new aluminum projects must be approved by the State Council. In the near future, approval will only be granted to environmental protection upgrade projects and those projects under state plan to replace

outdated equipments. All upgrade or replacement projects must have reliable supplies of alumina and power and transportation access.

Pricing

The PRC government does not impose any limitations with respect to the pricing of alumina, primary aluminum and related products. Thus, alumina and primary aluminum producers are free to set prices for their products. All the raw materials, supplemental materials and other supplies that we purchase are based on market prices. Freight transportation on the national railway system is subject to government mandated pricing.

Electricity Supply and Price

The State Electricity Regulatory Commission of the People's Republic of China is responsible for the supervision and administration of the power industry in China. The NDRC and local governments regulate electricity pricing. Electricity suppliers may not change their electricity prices without governmental authorization.

The Electric Power Law of the People's Republic of China and related rules and regulations govern electricity supply and distribution. Currently, China's state-owned power companies, through their respective local subsidiaries, operate all the regional power grids in China from which we obtain most of our electricity requirements. In October 2007, Chinese government issued the "Notice on Further Solutions of the Difference in Electricity Rates", according to which the preferential electricity prices originally enjoyed by Chinese primary aluminum enterprises have been gradually abolished.

Regulations Concerning Imports and Exports of Alumina and Primary Aluminum

Import taxes on alumina and primary aluminum have been eliminated. The export tax rate for certain primary aluminum products has been 15% since August 1, 2007.

Environmental Protection Laws and Regulations

The Ministry of Environmental Protection of the People's Republic of China is responsible for uniform supervision and control of environmental protection in China. It formulates national environmental quality and discharge standards and monitors China's environmental system. Environmental protection bureaus at the county level or above are responsible for environmental protection within their respective jurisdictions.

Environmental regulations require companies to file an environmental impact report with the relevant environmental bureau for approval before undertaking the construction of a new production facility or any major expansion or renovation of an existing production facility. New facilities built pursuant to this approval are not permitted to operate until the relevant environmental bureau has performed an inspection and is satisfied that the facilities are in compliance with environmental standards.

The Environmental Protection Law requires any facility that produces pollutants or other hazards to incorporate environmental protection measures in its operations and establish an environmental protection responsibility system. Such system includes adoption of effective measures to control and properly dispose of waste gases, water and residue, dust or other waste materials. Any entity that discharges pollution must register with the relevant

environmental protection authority.

Penalties for breaching the Environmental Protection Law include a warning, payment of damages and imposition of a fine. Any entity undertaking a construction project that fails to install pollution prevention and control facilities in compliance with environmental standards for a construction project may be ordered to suspend production or operations and fined. Criminal liability may be imposed for a material violation of environmental laws and regulations that causes loss of property or personal injuries or death.

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Mineral Resources Laws and Regulations

All mineral resources in China are owned by the State under the current Mineral Resources Law. Exploration, exploitation and mining operations must comply with the relevant provisions of the Mineral Resources Law and are under the supervision of the Ministry of Land and Resources. Exploration and exploitation of mineral resources are also subject to examination and approval by the Ministry of Land and Resources and relevant local authorities. Upon approval, a mining permit or exploitation permit is issued by the relevant administrative authorities, which are responsible for supervision and inspection of mining exploitation in their jurisdiction. Annual reports are required to be filed by the holders of mining rights with the relevant administrative authorities.

The PRC government permits mine operators of collectively owned mines to exploit mineral resources in designated areas and individuals to mine scattered mineral resources. Such mine operators and individuals are subject to government regulation. Mining activities by individuals are restricted. Individuals are not permitted to exploit mineral reserves allocated for exploitation by a mining enterprise or company, or specified minerals prescribed by the State for protective mining. Indiscriminate mining that damages mineral resources is prohibited.

If mining activities result in damage to arable land, grassland or afforested area, the mining operator must take measures to return the land to an arable state within the prescribed time frame. Any entity or individual which fails to aluminum its remediation obligations may be fined and denied application for land use rights for new land by the relevant land and natural resources authorities.

It is unlawful for an entity or individual to conduct mining operations in areas designated for other legal mining operators. A mining operator whose exploitation causes harm to others in terms of production or in terms of living standards is liable for compensation and is required to take necessary remedial measures. When a mine is closed, a mine closure report and information concerning the mining facilities, hidden dangers, remediation and environmental protection must be submitted for examination and approval in accordance with the relevant PRC law and regulations.

The mineral products illegally extracted and the income derived from such activities may be confiscated and may result in fines, revocation of the mining permit and, in serious circumstances, criminal liability.

Tax Laws and Regulation

In March 2007, the PRC government promulgated the Enterprise Income Tax Law which became effective from January 1, 2008. The Enterprise Income Tax Law imposes a single income tax rate of 25% on both domestic and foreign invested enterprises. Certain branches and subsidiaries of the Company located in special regions of the PRC were granted tax concessions including preferential tax rates of 15%. The Enterprise Income Tax Law provides for a five-year transitional period for those entities that enjoy preferential tax treatment. On December 6, 2007, PRC government promulgated the Enterprise Income Tax Law Implementation Rules which also became effective on January 1, 2008.

C. Organizational Structure

Below is a summary of our corporate structure and principal subsidiaries:

Company	Percentage of ownership interest attribution to the Company	Principal activities
Baotou Aluminum Co., Limited	100%	Manufacture and distribution of primary aluminium, aluminium alloy and related fabrication products and carbon products
Chalco Hong Kong Ltd. ⁽¹⁾	100%	Overseas investments and alumina import and export activities
Chalco Ruimin Company Limited	90.12%	Manufacture of aluminium, magnesium and related alloy products; export activities
Chalco Southwest Aluminum Company Limited	60%	Manufacture and distribution of metal materials; sales of general machinery and equipment
Chalco Southwest Aluminum Cold Rolling Company Limited	100%	Rolling aluminium and aluminium alloy processing; development of high precision aluminium strip production technology; import and export activities
Chalco Zunyi Alumina Co., Ltd.	67%	Manufacture and distribution of alumina
China Aluminum International Trading Co., Ltd.	90.50%	Import and export activities
China Aluminum Mining Co., Ltd.	100%	Mining operations; manufacture of nonferrous metal products
Fushun Aluminum Co., Ltd.	100%	

		Aluminum smelting, manufacture and distribution of nonferrous metals
Gansu Hualu Aluminum Co., Ltd.	51%	Manufacture and distribution of primary aluminum
Henan Aluminum Company Limited	90.03%	Manufacture and distribution of aluminium and alloy related products
Jiaozuo Wanfang Aluminum Manufactory Co., Ltd	29%	Aluminum smelting, manufacture and distribution of nonferrous metals
Shandong Huayu Aluminum and Power Co., Ltd.	55%	Manufacture and distribution of primary aluminum
Shanxi Huasheng Aluminum Co., Ltd.	51%	Manufacture and distribution of primary aluminum, aluminum alloy and carbon-related products
Shanxi Huaze Aluminum and Power Co., Ltd.	60%	Manufacture and distribution of primary aluminum and anode carbon products; electric power generation
Xincheng Construction Supervisory Services Company Limited	100%	Supervisory services for construction projects
Zhongzhou Aluminum Construction Company Limited	100%	Construction and engineering services for mining industry
Zunyi Aluminum Co., Ltd.	62.10%	Manufacture and distribution of primary aluminum

(1) Chalco Hong Kong Ltd. is incorporated in Hong Kong and all other principal subsidiaries are incorporated in the PRC.

D. Property, Plants and Equipment

Mines

The following map sets forth details of the area surrounding Pingguo Mine, our largest mine:

The Guangxi Pingguo plant, located in the Guangxi Zhuang Autonomous Region, commenced operations in 1994. The surrounding infrastructure includes roadways and waterways.

Modernization and Physical Condition, Equipment, Infrastructure and Other Facilities

We have modern facilities at our mines, which were designed by professional PRC mine design institutes and adhere to international standards. Our mines are either open pit or underground. Our mines will generally have mining offices and transportation facilities that have access to local roads and highways. In addition, we utilize large- and small-capacity crushers with dual systems, washers and related heavy equipment such as bulldozers and scrapers.

Source of Power and Water

All of our mining facilities are connected to the local or regional electric power grids. Certain jointly owned mines that are in more remote areas depend on diesel powered equipment, which can be purchased at public markets. In addition, our mining facilities are connected to reliable water sources such as lakes, rivers or underground sources, all of which are sufficient for the requirements of each mine.

Land

Chinalco leases to us 461 pieces or parcels of land, located in eight provinces, covering an aggregate area of approximately 63.3 million square meters for any purpose related to our operations and businesses. Currently, all leases for our properties are valid and have not expired. The leased land mainly consists of:

- * 455 pieces of allocated land with an area of approximately 63.1 million square meters, for which Chinalco has obtained authorization from the relevant administrative authorities to manage and lease the land use rights; and
- * six pieces of land with an area of approximately 202,000 square meters for which Chinalco has paid the land premiums and has been granted land use rights certificates.

The land is leased for the following terms:

- * allocated land: 50 years commencing from July 1, 2001 (except for land use rights of mines operated by us, whose leased terms shall end on the expiration date of the mining rights or at the end of the actual mine life, whichever is earlier);
- * granted land: until expiration of the relevant land use right permits; and
- * for both allocated or granted land: normal commercial terms that stipulate, among other conditions, the terms of use, monthly or annual rental amounts payable in RMB and a six-month notification provision for termination of any lease agreement.

Buildings

Our principal executive offices, which we lease from Chinalco, are located at No. 62 North Xizhimen Street, Haidian District, Beijing, People's Republic of China, 100082.

Pursuant to the reorganization in connection with our initial public offering in 2001, Chinalco transferred to us, among other operating assets, ownership of the buildings and properties for the operation of our core businesses. Chinalco retained buildings and properties for its other operations. The buildings transferred to us comprise 4,631 buildings with an aggregate gross area of approximately 4.2 million square meters. These buildings may be sold or transferred only with the consent of Chinalco and in accordance with applicable land transfer procedures. Chinalco has undertaken to provide its consent and the necessary assistance to affect land grant procedures to ensure that our buildings can be legally transferred or sold.

We and Chinalco also lease to each other a number of other buildings and properties for ancillary uses, which comprise mainly buildings for offices, dormitory, canteen and storage purposes. We lease 59 buildings to Chinalco, with an aggregate gross area of approximately 62,819 square meters. Chinalco leases 100 buildings to us, with an aggregate gross area of approximately 273,637 square meters. The lease terms of all these buildings are 20 years commencing from July 1, 2001. Chinalco has obtained proper land and building title certificates for all of the buildings it leases to us. On March 28, 2005, we entered into a tenancy agreement with China Aluminum Development Company Limited, a wholly-owned subsidiary of Chinalco, in respect of the office premises at 12th to 16th floors and 18th to 31st floors of No. 62 North Xizhimen Street, Haidian District, Beijing, PRC with an aggregate gross floor area of 30,160.81 square meters for a term of three years. On October 15, 2008, our tenancy agreement with China Aluminum Development Company Limited expired, and we renewed the tenancy agreement to extend it for another three years commencing on October 16, 2008, pursuant to which, the aggregated gross floor area we lease under such tenancy agreement has been increased to 30,187.9 square meters.

For environmental issues in relation to the utilization of our assets, please refer to "Item 4. Information on the Company - Business Overview - Environmental Protection".

Our Expansion

Our capital expansion plan for 2010 requires a total of approximately RMB14.6 billion in capital expenditures for technology upgrading and expansion projects to increase our annual production capacity. In 2010, our annual production capacities of alumina and aluminum fabrication are expected to increase by approximately 1.6 million tonnes and 385,000 tonnes, respectively. For more information, see "Item 5. Operating and Financial Review and Prospects - Capital Expenditures and Capital Commitments".

The following table shows the expected aggregate effects of our expansion and improvement plans for our alumina, primary aluminum and aluminum fabrication production facilities for 2010:

Planned Capital Investment for 2010	Production Capacity as of December 31,	Expected Production Capacity as of
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		2009 December 31, 2010	
	(in billions RMB)	(in thousand tonnes)	
Alumina ⁽¹⁾	6.4	11,277.0	12,877.0
Primary aluminum	5.5	3,979.2	3,979.2
Aluminum fabrication ⁽²⁾	2.7	1,327.0	1,712.0
	<hr style="width: 100px; margin: 0 auto;"/>		
	14.6		
	<hr style="width: 100px; margin: 0 auto;"/>		

(1) Including 800,000 tonnes of expected capacity as of December 31, 2010 from Chalco Zunyi and 800,000 tonnes of expected capacity as of December 31, 2010 from Chongqing branch.

(2) Including 250,000 tonnes of expected capacity as of December 31, 2010 from Chalco Southwest Aluminum Cold Rolling, 250,000 tonnes of expected capacity as of December 31, 2010 from Chalco Ruimin and 35,000 tonnes of expected capacity as of December 31, 2010 from Northwest Aluminum.

Capital expenditures are expected to further expand our alumina and primary aluminum production capacities to further enhance synergies arising from economies of scale, vertical integration and unit cost reductions. In 2010, we will continue the expansion and restructuring of our primary aluminum, alumina and aluminum fabrication projects, including the following:

* Chalco Southwest Aluminum Cold Rolling aluminum fabrication project.

This project is expected to be completed in 2010, and we expect the completion of this project to increase our annual aluminum fabrication capacity by 250,000 tonnes. We expect to invest RMB1.64 billion in this project and had invested RMB1.25 billion by the end of 2009.

* Chalco Ruimin aluminum fabrication project.

This project is expected to be completed in 2010, and we expect to invest RMB2.87 billion in this project. By the end of 2009, we had invested RMB1.68 billion and this project had an annual project capacity of approximately 150,000 tonnes as of December 31, 2009. We expect this project to further increase our aluminum fabrication production capacity by approximately 100,000 tonnes in 2010 when it is completed.

- * Chalco Zunyi alumina project.

This project is expected to be completed in 2010, and we expect the completion of this project to increase our annual alumina production capacity by 800,000 tonnes. The total investment for this project is RMB4.41 billion and we had invested RMB3.65 billion by the end of 2009.

- * Chongqing branch alumina project.

This project is expected to be completed in 2010, and we expect the completion of this project to increase our annual alumina production capacity by 800,000 tonnes. We expect to invest RMB4.97 billion in this project and we had invested RMB4.22 billion by the end of 2009.

- * Northwest Aluminum aluminum foil project

: This project is expected to be completed in 2010, and we expect the completion of this project to increase our annual aluminum foil production capacity by 35,000 tonnes.

- * Gansu Hualu production safety and environmental protection project:

This project was undertaken to enhance our production safety and environmental protection procedures and is expected to be completed in 2011. We expect the completion of this project to increase our annual primary aluminum production capacity by 70,000 tonnes.

- * Liancheng branch modernization and environmental protection project:

This project was undertaken to enhance our environmental protection procedures and modernize our facilities, which will involve the replacement of outdated equipment, and is expected to be completed in 2011. We expect the completion of this project to increase our annual primary aluminum production capacity by 388,000 tonnes.

We intend to fund these capital expenditures through a combination of internal funds derived from our own operations and the proceeds from medium-term and long-term debt financing.

Item Unresolved Staff Comments
4A.

None.

Item Operating and Financial Review and Prospects

5.

The following discussion and analysis should be read in conjunction with our audited financial statements and selected historical financial data, in each case together with the accompanying notes included elsewhere in this annual report. This section contains certain "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995. Forward-looking statements are not guarantees of our future performance or results and our actual results could materially differ from those disclosed in the forward-looking statements. In evaluating our business, you should carefully consider the information provided in "Item 3. Key Information - Risk Factors".

The IFRS financial information discussed in this section has been restated after taking into account the effects of common control business combinations that took place in 2008 and 2009, which were accounted for using merger accounting. See Note 5 to our consolidated financial statements.

A. Overview

We are the largest producer of alumina, primary aluminum and aluminum fabrication products in China. We were the third largest producer of alumina and the fourth largest producer of primary aluminum in the world in terms of production volume for the year ended December 31, 2009. We are engaged principally in alumina refining, primary aluminum smelting and aluminum fabrication. We organize and manage our operations according to the following key product categories:

- * Alumina segment, which consists of the mining of bauxite and refining bauxite into alumina. Our alumina are sold internally to our primary aluminum smelters and externally to smelters outside our Group. This segment also includes the trade of alumina and the production and sale of alumina chemical products and gallium.
- * Primary aluminum segment, which consists of the procurement and smelting of alumina to produce primary aluminum. Our primary aluminum is sold internally to our aluminum fabrication plants and external customers. This segment also includes the production and sale of carbon products and aluminum alloy products.
- * Aluminum fabrication segment, which consists of the procurement and processing of primary aluminum and other raw materials to produce aluminum fabrication products, such as casts, planks, screens, extrusions, forges, powder and die castings. All our aluminum fabrication products are sold to external customers.

Our other activities include research and development activities, the provision of products and services relating to our aluminum business and other ancillary activities.

Critical Accounting Policies

We prepare our consolidated financial statements in accordance with IFRS as issued by the IASB, which requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the accounting policies. The areas in our financial reporting involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 4 to our consolidated financial statements. We have established procedures and processes to facilitate the making of such judgments in the preparation of our consolidated financial statements. Management has used the best information available but actual performance may differ from our management's estimates and future changes in key variables could change future reported amounts in our financial statements.

Property, Plant and Equipment

The carrying amounts of long-lived assets are reviewed whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. An impairment exists when the carrying amount of an asset exceeds its recoverable amount. The recoverable amount is measured at the higher of fair value less costs to sell and value-in-use, calculated based on discounted future pre-tax cash flows related to the asset or the cash generating unit to which the assets belong. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows from other assets or group of assets and is not larger than operating segment. Estimates of future cash flows include the cash inflows from continuing use of the asset and cash outflows to prepare the asset for use that can be directly attributed, or allocated on a reasonable and consistent basis, to the asset. If applicable, estimates also include net cash flows to be received (or paid) for the disposal of the asset at the end of its useful life. Management made a number of significant assumptions and estimates in the application of the discounted future cash flow model to forecast operating cash flows, including business prospects, market conditions, selling prices and sales volume of products and costs of production. If there is an indication of impairment, the carrying amount of such assets is written down to its recoverable amount. In addition, we determine the estimated useful lives of our property, plant and equipment based on the historical experience of the actual useful lives of property, plant and equipment of similar nature and functions. Management will increase the depreciation charge where useful lives are less than previous estimates, and will write-off or write-down technically obsolete or non-strategic assets that have been abandoned or sold. Results in actual transactions could differ from those estimates used to evaluate the useful lives and impairment of such long-lived assets.

Goodwill

Goodwill represents the excess of purchase consideration over the fair value of the Group's share of the net identifiable assets of subsidiaries/jointly controlled entities/associates acquired at the date of acquisition. Goodwill on acquisitions of subsidiaries is included in intangible assets. Goodwill on acquisitions of jointly controlled entities and associates is included in investments in jointly controlled entities and associates respectively. Goodwill is tested annually or when an indication of impairment exists for impairment and carried at cost less accumulated impairment losses. Impairment losses on goodwill are not reversed. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold. Goodwill is allocated to cash-generating units for the

purposes of impairment testing. The allocation is made to those cash-generating units or groups of cash-generating units that are expected to benefit from the business combination in which the goodwill arose identified according to operating segment.

Inventories

The Group's management tests whether inventory suffered any impairment based on estimates of the net realizable value of the inventory. For different types of inventories, we have made estimates and assumptions relating to selling price, costs of conversion, selling expenses and related tax expense to calculate their net realizable value. It is reasonably possible that if there is a significant change in the Group's business operations and external conditions, the net realizable value within the next fiscal year would be significantly affected.

Income Tax

The Group estimates its income tax provision and deferred income taxation in accordance with the prevailing tax rules and regulations, taking into account any special approvals obtained from relevant tax authorities and any preferential tax treatment to which it is entitled in each location or jurisdiction in which the Group operates. There are many transactions and calculations for which the ultimate tax determination is uncertain during the ordinary course of business. The Group recognizes liabilities for anticipated tax audit issues based on estimates of whether additional taxes will be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the income tax and deferred income tax provisions in the period in which such determination is made.

For temporary differences which give rise to deferred income tax assets, the Group has assessed the likelihood that the deferred income tax assets could be recovered. Major deferred income tax assets relate to deductible tax losses and provision for impairment of receivables and accruals of expenses not yet deductible for tax purposes. Due to the effects of these temporary differences on income tax, the Group recorded deferred income tax assets amounting to approximately RMB1,818 million as at December 31, 2009 (2008: approximately RMB882 million). Deferred income tax assets are recognized based on the Group's estimates and assumptions that they will be recovered from taxable income arising from continuing operations in the foreseeable future.

The Group believes it has recorded adequate current tax provision and deferred income taxes based on the prevailing tax rules and regulations and its current best estimates and assumptions. In the event that future tax rules and regulations or related circumstances change, adjustments to current and deferred income taxation may be necessary which would impact the Group's results or financial position.

New IFRS Pronouncements

For a detailed discussion of new accounting pronouncements, please see Note 2 to our audited consolidated financial statements.

Factors Affecting Our Results of Operations

Our results of operations and the period-to-period comparability of our financial results are affected by a number of factors. Our financial statements may not be indicative of our future earnings, cash flows or financial position for a number of reasons including those described below.

Prices of and Demand for Primary Aluminum

Like most primary aluminum producers in China, we price our primary aluminum products by reference to the Shanghai Futures Exchange ("SHFE") spot prices. SHFE primary aluminum spot prices generally reflect LME primary aluminum spot prices, but also account for international transportation costs, import tariffs, value-added tax and other import-related costs. Fluctuations in the SHFE spot prices, and LME spot prices by extension, have a significant effect on our operating results. Primary aluminum prices on the SHFE and LME tend to be cyclical and volatile. The following table sets out the average three-month primary aluminum futures price on the LME and SHFE in the periods indicated.

	2007	2008	2009
	<u> </u>	<u> </u>	<u> </u>
	(U.S. dollar per tonne)		
LME	2,661.0	2,573.0	1,664.0
Shanghai			
Futures			
Exchange ⁽¹⁾	2,294.0	2,180.0	1,993.5

(1) Translated into U.S. dollars at U.S. dollar 1.00 = RMB6.8307, being the annual average for 2009.

During 2009, the international and domestic prices of primary aluminum fluctuated significantly as a result of the international financial crisis and global recession. In early 2009, the spot price of aluminum on the LME and SHFE reached an annual low of US\$1,288 per tonne and RMB11,405 per tonne respectively. However, since March 2009, the prices of and demand for aluminum have increased due to the recovery of the global economy, the introduction of stimulus packages worldwide and the purchase of non-ferrous metals by the PRC government for the national reserve. As a result, the spot price of aluminum on the LME and SHFE reached a high of US\$2,265 per tonne and RMB16,850 per tonne respectively in 2009. In 2009, our average selling prices of primary aluminum decreased by 19.7% from 2008, compared to the decrease in the average spot price of aluminum on the LME and the SHFE, of 35.3% and 21.5%, respectively, for the same period.

In 2009, the global output of primary aluminum reached approximately 37.68 million tonnes, representing a decrease of 5.7% from 2008. The global consumption of aluminum reached approximately 34.28 million tonnes, representing a decrease of 10.1% from 2008. Domestic consumption of primary aluminum in China increased by 10.4% in 2009 from the prior year, compared with a decrease of 1.5% of the domestic output of the primary aluminum in the same period. Aluminum imports into China increased substantially in 2009 to account for the growth difference.

Since 2003, we have entered into a number of one-year primary aluminum sales contracts, pursuant to which the sales price is the weighed average price of the contract's delivery period on the Shanghai Futures Exchange. We sold approximately 1.3 million tonnes under these contracts in 2009, representing 37.8% of our primary aluminum production volume and 35.0% of our external sales volume.

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Prices of and Demand for Alumina

We sell our alumina products by way of spot sales and under long-term contracts. We price our alumina products according to the nature of the sale as described below.

We set uniform prices for all our external sales of alumina by reference to alumina prices quoted in reference markets. Our pricing generally takes into account:

- * alumina imports into China, CIF Chinese ports;
- * international transportation costs;
- * the applicable value-added tax;
- * import related fees;
- * our short-term and mid-term projections for the supply and demand of alumina; and
- * domestic demand and supply.

In 2009, the international and domestic spot prices of alumina fluctuated significantly. The spot price of alumina in the international market reached a high of approximately US\$347 per tonne and bottomed out at approximately US\$180 per tonne. The spot price of alumina in the domestic market similarly reached a high of RMB2,700 (US\$396) per tonne and bottomed out at RMB1,800 (US\$264) per tonne. In 2009, our average selling price of alumina was RMB2,269 (US\$332.2) per tonne, representing a year-on-year decrease of 28.4%, and the average import price of alumina was US\$253 per tonne, representing a year-on-year decrease of 29.1%.

The global output of alumina for 2009 was approximately 72.66 million tonnes, representing a year-on-year decrease of 8.1%. The global alumina consumption reached approximately 72.36 million tonnes, representing a year-on-year decrease of 7.8%. In response to the economic recovery, global alumina manufacturers began to increase their production in the third quarter of 2009. As of the end of December 2009, the production utilization rate of global alumina manufactures had reached approximately 81%, while that of alumina manufacturers in China was approximately 90%. In 2009, domestic output of alumina products reached approximately 23.82 million tonnes, representing a year-on-year increase of 4.6%. Domestic consumption of alumina was approximately 26.43 million

tonnes, representing a year-on-year decrease of 1.0%. In 2009, alumina imported into the PRC amounted to approximately 5.14 million tonnes, representing a year-on-year increase of 12.2%.

Internationally, the customary practice for alumina pricing under long-term contracts is by reference to the LME price for primary aluminum. We have entered into a number of domestic long-term alumina sales contracts with terms ranging from three to five years, pursuant to which the sales price is determined by reference to the three-month primary aluminum prices on the SHFE. As a result, fluctuations in primary aluminum prices on the SHFE can affect our alumina prices under these long-term contracts, and the effect of such fluctuations may become more pronounced as we increase the proportion of our alumina sales conducted under long-term contracts. We sold approximately 2.36 million tonnes of alumina under long-term contracts in 2009, representing 53.1% of our alumina sales volume. As we continue to establish long-term relationships with major customers, we expect a majority of our alumina sales will eventually be sold under long-term contracts.

Electricity Costs

Smelting operations require a substantial and continuous supply of electricity and electricity cost is the most significant cost component in our primary aluminum production. Electricity accounted for approximately 42.0% of our unit production cost for primary aluminum in 2009. The availability and price of electricity are key considerations in our primary aluminum operations. Interruptions of electricity supply can result in lengthy production shutdowns, increased costs associated with restarting production and waste of production in progress, and prolonged interruptions can cause damage to or the destruction of production equipment and facilities.

The preferential electricity prices formerly enjoyed by Chinese primary aluminum enterprises in 2007 were gradually reduced during 2008 and completely eliminated in 2009. The implementation of this policy has increased the operating costs of primary aluminum producers in China. Our average annual electricity price decreased by 5.4% in 2009. In 2009, nine of our primary aluminum smelters were selected to participate in a direct electricity purchase program, which allows those smelters to purchase electricity directly from power generation enterprises at prices set by such power generation enterprises and us, which we believe will be lower than market rates. Five of our primary aluminum smelters with an aggregate annual production capacity of approximately 755,000 tonnes, representing approximately 19.0% of our primary aluminum capacity as of December 31, 2009, have entered into direct electricity supply agreements under this program, and the remaining four of our primary aluminum smelters are negotiating similar agreements.

We have implemented energy conservation measures at a number of our production facilities, mainly by streamlining production processes and improving our product portfolio. As a result, the total energy consumption of our primary aluminum segment in 2009 decreased by 18.1% from 2008 despite a 5.8% increase in output during the same period.

Acquisitions

Our results of operations and financial condition have been and will continue to be affected by our historical acquisitions of subsidiaries, associates and branch facilities. These acquisitions have allowed us to expand our production capacities and achieve vertical integration within the aluminum market value chain in a short timeframe.

We believe these acquisitions will position us to increase and diversify our revenue stream, stabilize our results of operations through greater control of downstream markets and expand our market share in China's aluminum industry. We have relied on cash on hand and equity and debt financing to fund these acquisitions. In 2007 and 2008, we made a series of acquisitions that significantly expanded our primary aluminum and aluminum fabrication capacity. In 2009, we acquired 100% of the equity interest in Zhongzhou Construction, Hongrui Chemical, Xincheng and the limestone mine business of Zhongzhou Aluminum Fengying Company Ltd., which enhanced our ability to provide engineering and construction services and supervisory services for construction projects. To realize the intended economic benefits of these acquisitions, we must increase our revenues sufficiently to recover our capital expenditure and offset other costs resulting from the acquisitions, see "- Sales and Facility Utilization Rates".

Sales and Facility Utilization Rates

Given our high proportion of fixed costs, we must generate sufficient sales to absorb our fixed costs to maintain or increase our operating margins. Our acquisitions and production expansion in recent years have significantly increased our costs that are relatively fixed in nature such as leases and depreciation of property, plant and equipment and employee benefit expenses. If we are able to maintain satisfactory facility utilization rates and productivity, our production capacity expansion will enable us to reduce our unit costs through economies of scale and recover associated increased costs through higher output. Beginning in the fourth quarter of 2008 and continuing through the second quarter of 2009, the cost of alumina purchased from certain of our refineries exceeded the prices of alumina available from other sources. We increased our external purchases of alumina in 2009 for trading and production purposes, which decreased our utilization of certain alumina refineries as a consequence.

Debt and Financing Costs

Our financing costs consist predominantly of interest expense on our borrowings, which we have incurred mainly to fund our capital expenditures. Interest rates on loans related to capital expenditures and working capital set by banks generally follow guidelines issued by the People's Bank of China. The People's Bank of China has regulated the interest rates for commercial loans chargeable by state-owned banks from time to time as part of the PRC government's efforts to regulate the PRC economy. Such interest rates increased from the beginning of 2008 until the fourth quarter of 2008 when they decreased. In 2009, we incurred interest expense of RMB2.3 billion on our borrowings recognized in the statement of comprehensive income, representing a 23.3% increase from 2008, and interest expense of RMB880.3 million on our borrowings attributable to the construction of property, plant and equipment was capitalized in property, plant and equipment. Such increase was primarily due to an increase in the outstanding principal amount on bank loans and other borrowings, including short-term and long-term bonds and medium-term notes.

Consolidated Results of Operations

The following table sets forth certain income and expense items as a percentage of our revenue from our consolidated statements of comprehensive income for the periods indicated:

Year ended December 31,	
2008	2009
(%)	(%)

Revenue	100.0	100.0
Cost of sales	(92.5)	(98.3)
	<u> </u>	<u> </u>
Gross profit	7.5	1.7
Other gains, net	0.4	(0.1)
Selling and distribution expenses	(2.0)	(1.8)
General and administrative expenses	(3.3)	(4.2)
Research and development expenses	(0.2)	(0.3)
	<u> </u>	<u> </u>
Operating profit	2.4	(4.7)
Finance costs, net	(2.2)	(3.0)
	<u> </u>	<u> </u>
Operating (loss)/profit after net finance costs	<u> </u> 0.2	<u> </u> (7.7)

Sales to Chinalco and its subsidiaries, jointly-controlled entities, associates and other related parties accounted for approximately 9.7% and 10.9% of consolidated revenue for the years ended December 31, 2008 and 2009, respectively. For information on related party transactions, see "Item 7 - Major Shareholders and Related Party Transactions - Related Party Transactions" and Note 35 to our audited consolidated financial statements.

Year Ended December 31, 2009 Compared with Year Ended December 31, 2008

Results of Operations

We incurred net loss attributable to equity holders of RMB4,642.9 million for the year ended December 31, 2009, compared with a net profit of RMB19.5 million for the year ended December 31, 2008.

Revenue

Our revenue decreased by 8.4% from RMB76,728.1 million for the year ended December 31, 2008 to RMB70,268.0 million for the year ended December 31, 2009, primarily due to the decrease in the prices of our products. Our average selling prices of alumina and primary aluminum decreased by 28.4% and 19.7%, respectively, in 2009 from the prior year. The significant decrease in the average price of our products reflects the effect of the global recession,

particularly from the fourth quarter of 2008 through early 2009, which significantly reduced demand for our products from major aluminum consuming industries such as the automobile, transportation and construction industries. The decrease in revenue was partially offset by the increase in the external sales volumes of alumina and primary aluminum, reflecting the increased demand for these products as the global economy started to recover in the second half of 2009.

Cost of Sales

Our cost of sales decreased by 2.7% from RMB70,960.7 million for the year ended December 31, 2008 to RMB69,079.4 million for the year ended December 31, 2009, primarily due to the decrease in the prices of certain raw materials and production input such as bauxite, alumina, fuel and electricity that reduced our per unit cost and the implementation of our cost reduction efforts, including our efforts to reduce energy consumption. The decrease in cost of sales was partially offset by the increase in the sales volume in our alumina and primary aluminum segments.

Selling and Distribution Expenses

Our selling and distribution expenses decreased by 19.1% from RMB1,562.8 million for the year ended December 31, 2008 to RMB1,264.9 million for the year ended December 31, 2009, primarily due to the decrease in the transportation, loading and packaging expenses as a result of our efforts to optimize logistics management and allocate production among our production sites to minimize delivery costs.

General and Administrative Expenses

Our general and administrative expenses increased by 17.9% from RMB2,507.0 million for the year ended December 31, 2008 to RMB2,956.5 million for the year ended December 31, 2009, primarily due to the early retirement benefits and severance compensation that we paid in connection with the implementation of early retirement schemes and employment reduction plans at a number of branches and subsidiaries.

Research and Development Expenses

Our research and development expenses increased slightly from RMB177.5 million for the year ended December 31, 2008 to RMB177.8 for the year ended December 31, 2009.

Impairment Loss on Property, Plant and Equipment

Our impairment loss on property, plant and equipment increased significantly from RMB1.3 million for the year ended December 31, 2008 to RMB623.8 million, primarily due to the selective retirement of certain property, plant and equipment which resulted in an impairment loss of RMB624 million as the result of our implementation structural adjustments. As part of our ongoing effort to optimize operations, we discontinued the use of certain production equipment in 2009 and reduced the carrying amount of such equipment to our estimated net proceeds, or recoverable amount, from disposal of such equipment.

Other Income

Other income increased by 49.9% from RMB100.8 million for the year ended December 31, 2008 to RMB151.1 million for the year ended December 31, 2009, primarily due to an increase in government grants. In 2009 we received government grants of RMB151 million in the form of government subsidies for electricity costs, our environmental protection projects and research and development efforts, whereas in 2008 we received government grants of RMB101 million.

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Other Gains, Net

Our net other gains increased from RMB212.8 million for the year ended December 31, 2008 to RMB403.8 million for the year ended December 31, 2009, primarily due to an increase in realized gain on futures and option contracts of RMB167.6 million.

Operating Loss

As a result of the foregoing, we incurred operating loss of RMB3,279.4 million for the year ended December 31, 2009, compared with an operating profit of RMB1,832.4million for the year ended December 31, 2008.

Finance Costs, Net

Our net finance cost increased by 25.0% from RMB1,709.7 million for the year ended December 31, 2008 to RMB2,137.8 million for the year ended December 31, 2009, primarily due to the increase in interest expenses as the result of the increase in our bank loans and other borrowings, partially offset by the decrease in our effective interest rate.

Income Tax Benefit

Our income tax benefit increased significantly from RMB34.2 million for the year ended December 31, 2008 to RMB711.0 million for the year ended December 31, 2009, primarily due to our recognition of deferred income tax assets in respect of the losses we incurred in 2009. The deferred income tax assets are expected to be realized in future utilization periods.

Discussion of Segment Operations

We account for our operations on a segmental basis, that is, separately prepare the accounting for our alumina, primary aluminum and aluminum fabrication segments as well as other segment operations. Unless otherwise indicated, also included in these segments are other revenues derived from activities such as supplying electricity, gas, heat and water to affiliates, selling scrap and other materials and providing services including transportation and research and development to third parties. Interest income included in net finance costs is not attributed to any segments. For additional data and information relating to our business segments and segment presentation, see Note 24 to our audited consolidated financial statements.

The following table sets forth a breakdown of our revenue by segment and the contribution of external sales and inter-segment sales for the periods indicated.

	Before elimination of inter-segment Sales		After elimination of inter-segment sales	
	Year Ended December 31,			
	2008 RMB	2009 RMB	2009	2009
(in millions)	(in millions)		%	%
Revenue				
Alumina:				
External sales	14,808.9	11,202.8	13.7	15.9
Inter-segment sales	16,431.4	8,948.4	10.9	
Total	31,240.3	20,151.2	24.6	
Primary aluminum:				
External sales	48,467.2	46,382.5	56.6	66.0
Inter-Segment sales	3,158.6	2,715.4	3.3	
Total	51,625.8	49,097.9	59.9	
Aluminum fabrication:				
External sales	10,899.7	9,019.2	11.0	12.8
Total	10,899.7	9,019.2	11.0	
Corporate and others				
External sales	2,552.3	3,663.5	4.5	5.3

Total Revenue before Inter-segment eliminations	96,318.1	81,931.8	100.0	
Eliminations of inter-segment sales	(19,590.0)	(11,663.8)		
Consolidated total revenue	<u>76,728.1</u>	<u>70,268.0</u>	<u>100.0</u>	

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The following table sets forth segment results by segment for the periods indicated.

	Year ended December 31,	
	2008	2009
	(RMB in millions)	
Alumina:		
Revenue	31,240.3	20,151.2
Total operating expenses ⁽¹⁾	(29,767.8)	(22,599.7)
Segment results	<u>1,472.5</u>	<u>(2,448.5)</u>
Primary aluminum:		
Revenue	51,625.9	49,097.9
Total operating expenses ⁽¹⁾	(51,110.1)	(49,012.0)
Segment results	<u>515.8</u>	<u>85.9</u>
Aluminum Fabrication:		
Revenue	10,899.7	9,019.2
Total operating expenses ⁽¹⁾	(11,217.8)	(9,631.0)

Segment results	(318.1)	(611.8)
Corporate and others		
Revenue	2,552.4	3,663.5
Total operating expenses ⁽¹⁾	(2,656.3)	(3,854.7)
Segment results	(103.9)	(191.2)
Elimination	266.1	(113.8)
Total operating profit/(loss)	1,832.4	(3,279.4)

(1) Primarily consist of cost of sales, general and administrative expenses and selling and distribution expenses attributable to each segment

Year Ended December 31, 2009 Compared with Year Ended December 31, 2008.

Alumina Segment

Revenue.

Total revenue generated by the alumina segment decreased by 35.5% from RMB31,240.3 million for the year ended December 31, 2008 to RMB20,151.2 million for year ended December 31, 2009, primarily due to decrease in the price of alumina in 2009.

The revenue from external sales in the alumina segment decreased by 24.4% from RMB14,809 million for the year ended December 31, 2008 to RMB11,203 million for year ended December 31, 2009, primarily due to the decrease in the selling price of alumina partly offset by a slight increase in sales volume. The external average selling price of alumina decreased by 28.4% from RMB2,710 per tonne for the year ended December 31, 2008 to RMB1,939 per tonne for the year ended December 31, 2009. The external sales volume of alumina increased by 4.0% from 4,264,400 tonnes (including 1,134,800 tonnes from pure-trading activities) for the year ended December 31, 2008 to 4,436,600 tonnes (including 1,603,600 tonnes from pure-trading activities) for the year ended December 31, 2009. The external sales volume of self-produced alumina decreased by 296,600 tonnes and the trading volume of alumina traded by us increased by 468,800 tonnes from 2008 to 2009.

Revenue from internal sales of alumina to our smelters decreased by 45.5% from RMB16,431.4 million for the year ended December 31, 2008 to RMB8,948.4 million for year ended December 31, 2009, primarily due to a decrease in the volume and selling price of internal sales of alumina as a result of increased competition and challenging market conditions.

Cost of Sales.

The total cost of sales for our alumina segment decreased for the year ended December 31, 2009 due to the decrease in the prices of raw materials and the implementation of our cost reduction measures, including our efforts to reduce energy consumption.

Segment Results.

Our alumina segment incurred an operating loss of RMB2,449 million for the year ended December 31, 2009, compared with an operating profit of RMB1,472.5 million for the year ended December 31, 2008.

Primary Aluminum Segment

Revenue

. Total revenue generated by the primary aluminum segment decreased by 4.9% from RMB51,626 million for the year ended December 31, 2008 to RMB49,098 million for year ended December 31, 2009, primarily due to the decrease in the selling price of primary aluminum.

Revenue from external sales of the primary aluminum segment decreased by 4.3% from RMB48,467.2 million for the year ended December 31, 2008 to RMB46,383 million for the year ended December 31, 2009, primarily due to the decrease in the selling price of primary aluminum, partly offset by a 23% increase in sales volume from 3,101,300 tonnes to 3,814,600 tonnes. Our external average selling price of primary aluminum decreased by 19.7% from RMB14,742 per tonne for the year ended December 31, 2008 to RMB11,835 per tonne for the year ended December 31, 2009.

Revenue from internal sales of primary aluminum to our aluminum fabrication plants decreased by 14.1% from RMB3,159 million for year ended December 31, 2008 to RMB2,715 million for the year ended December 31, 2009, primarily due to the decrease in the production volume at our aluminum fabrication plants for the year ended December 31, 2009 compared to the prior year and the decrease in the selling price of our primary aluminum.

Cost of Sales.

The total cost of sales for our primary aluminum segment decreased for the year ended December 31, 2009 due to the decrease in the prices of raw materials and the implementation of our cost reduction measures, including our efforts to reduce energy consumption. Our decrease in cost of sales was partly offset by the increase in our external sales volume.

Segment Results

. The operating profit of our primary aluminum segment decreased by 83.3% from RMB516 million for the year ended December 31, 2008 to RMB86 million for the year ended December 31, 2009.

Aluminum Fabrication Segment

Revenue.

Total revenue generated by the aluminum fabrication segment decreased by 17.3% from RMB10,900 million for the year ended December 31, 2008 to RMB9,019.2 million for the year ended December 31 2009, primarily due to the decrease in demand from end-user markets.

Cost of Sales

. The total cost of sales for our aluminum fabrication segment decreased for the year ended December 31, 2009 due to the decrease in the prices of raw materials and the implementation of our cost reduction measures, including efforts to reduce energy consumption.

Segment Results

. The total operating loss of our aluminum fabrication segment increased by 92.5% from RMB318.1 million for the year ended December 31, 2008 to RMB611.8 million for the year ended December 31, 2009.

B. Liquidity and Capital Resources

Historically, our primary sources of funding have been cash generated from operating activities, prepayments and deposits from customers, borrowings and proceeds from equity or debt offerings. Our primary uses of funds have been working capital for production, capital expenditures and repayments of short-term, medium-term and long-term borrowings.

Our current assets amounted to RMB36,333.9 million as of December 31, 2009, representing a decrease of RMB6,223.1 million from RMB42,557.0 million as of December 31, 2008, primarily due to a decrease in cash and cash equivalents of RMB8,582.5 million, partly offset by an increase in trade and notes receivable. We require our customers to make deposits or prepayments for alumina and primary aluminum purchases, and the total balance of deposits and prepayments that we had received was RMB989.7 million as of December 31, 2009. However, in 2009, we repaid two short-term bonds with an aggregate principal amount of RMB5,000 million, which were issued in 2008 for working capital purposes. As of December 31, 2009, our bank balances and cash amounted to RMB7,858.8 million, representing a decrease of 51.8% from RMB16,297.4 million as of December 31, 2008. Our trade and notes receivable amounted to RMB3,203.1 million as of December 31, 2009, representing an increase of RMB1,151.0 million from RMB2,052.1 million as of December 31, 2008, primarily due to a 143.8% increase in notes receivable from RMB732.4 million as of December 31, 2008 to RMB1,785.6 million as of December 31, 2009. This increase in trade and notes receivable was primarily attributable to our aluminum fabrication segment, which extends credit terms to customers, but also reflected the general increase in sales activities since the second half of 2009. The average turnover days of trade receivable in 2009 was seven days, compared to six days in 2008.

As of December 31, 2009, our current liabilities amounted to RMB40,029.9 million, representing a 3.6% increase from RMB38,622.1 million as of December 31, 2008. Our current liabilities increased primarily due to an increase in total short-term borrowings from RMB22,290.2 as of December 31, 2008 to RMB25,819.8 million as of December 31, 2009. Trades and notes payable, which primarily represented amounts due to suppliers of raw materials, also increased by RMB1,347.0 million in line with the increase in production activities since the second half of 2009. Our increase in current liabilities was partly offset by a decrease in other payables and accrued expenses from RMB11,366.9 million as of December 31, 2008 to RMB7,928.0 million as of December 31, 2009.

As of December 31, 2009, we had net current liabilities of RMB3,696.0 million as compared with our net current assets of RMB3,934.9 million as of December 31, 2008. As of December 31, 2009, our current ratio (current assets/current liabilities) was 0.91 compared with 1.10 as of December 31, 2008. Our quick ratio ((current assets - inventories)/current liabilities) was 0.40 compared with 0.59 in 2008.

During the past three years, we engaged in debt financing to fund our operations and business expansion. On June 13, 2007, we issued long-term corporate bonds with maturity of ten years in the principal amount of RMB2 billion. The fixed annual coupon and effective rates of these bonds are 4.50% and 4.64%, respectively. In June 2008, we issued medium-term notes in the principal amount of RMB5 billion with three-year terms for operating cash flows and capital expenditures. The fixed annual coupon and effective interest rates of these notes are 5.30% and 5.62%, respectively. In October 2008, we issued medium-term notes with a total face value of RMB5 billion at par with five-year terms for operating cash flows and capital expenditures. The fixed annual coupon and effective interest rates of these notes are 4.58% and 4.92%, respectively.

As of December 31, 2009, our gearing ratio (net debts/total capital as defined in Note 3.3 to our audited consolidated financial statements) was approximately 58.3% as of December 31, 2009 as compared with approximately 51.8% as of December 31, 2008.

Our current assets amounted to RMB42,557.0 million as of December 31, 2008, representing an increase of RMB12,225.1 million from RMB30,331.9 million as of December 31, 2007, primarily due to an increase in cash and cash equivalents of RMB7,157.1 million, partly offset by a decrease in trade and notes receivable. We require our customers to make deposits or prepayments for alumina and primary aluminum purchases, and the total balance of deposits and prepayments that we had received was RMB1,107.8 million. As of December 31, 2008, our bank balances and cash amounted to RMB16,297.4 million, representing an increase of 80.0% from RMB9,056.4 million as of December 31, 2007. Our trade and notes receivable amounted to RMB2,052.1 million as of December 31, 2008, representing a decrease of RMB1,686.1 million from RMB3,738.2 million as of December 31, 2007. The average turnover days of trade receivable in 2008 was six days, compared to four days in 2007.

As of December 31, 2008, our current liabilities amounted to RMB38,622.1 million, representing a 63.3% increase from RMB23,646.3 million as of December 31, 2007. Our current liabilities increased primarily due to an increase in total short-term borrowings and current portion of long-term borrowings increased by RMB10,943.7 million to RMB22,290.2 million as of December 31, 2008 from RMB11,346.5 million as of December 31, 2007. Trade and notes payable, which primarily represented amounts due to suppliers of raw materials, also increased by RMB291.4 million. Our increase in current liabilities was partly offset by a decrease in current income tax liabilities of RMB484.9 million.

As of December 31, 2008, our current ratio (current assets/current liabilities) was 1.10, representing a decrease of 0.18 as compared with 1.28 as of December 31, 2007. Our quick ratio ((current assets - inventories)/current liabilities) was 0.59 compared with 0.63 in 2007.

As of December 31, 2008, our gearing ratio (net debts/total capital as defined in Note 3.3 to our audited consolidated financial statements) was approximately 51.8% as of December 31, 2008 as compared with approximately 34.2% as of December 31, 2007.

Our ability to obtain additional external financing in the future and the cost of such financing are subject to a variety of uncertainties, including:

- * obtaining PRC government approvals required to access domestic or international financing or to undertake any project involving significant capital investment, which may include one or more approvals from the NDRC, the State Administration of Foreign Exchange, the Ministry of Commerce and the China Securities Regulatory Commission depending on the circumstances;
- * our future operating performance, financial condition and cash flows;
- * the cost of financing and the condition of financial markets; and
- * potential changes in monetary policy of the PRC government with respect to bank interest rates and lending practices.

If we are unable to rollover, extend or refinance our short-term debts as necessary in a timely manner, we may be unable to meet our obligations in connection with debt servicing, trade and notes payable and/or other liabilities when they become due.

In light of our good credit standing and various domestic and overseas financing channels, we believe that we will not experience any difficulty financing capital investments. Our capital expenditures and external investments have historically been mainly financed by cash generated from operating activities, long-term and medium-term borrowings and equity offerings.

Cash Flows and Working Capital

Our cash and cash equivalents as of December 31, 2009 amounted to RMB7,401.4 million, including Renminbi balances and foreign currency deposits of Hong Kong dollar, U.S. dollar, Euro and Australian dollar, which translates into RMB46.8 million, RMB103.8 million, RMB2.4 million and RMB73.1 million respectively. The following table

sets forth a summary of our statement of cash flows for the periods indicated:

	Year ended December 31,	
	2008	2009
	RMB (in millions)	RMB
Net cash generated from/(used in) operating activities:		
Cash flows generated from operating activities before taxes and changes in working capital ⁽¹⁾	7,263.7	3,136.2
Net change in working capital ⁽²⁾	(731.1)	(3,640.7)
PRC income tax paid	(1,508.6)	(201.4)
Total	5,024.0	(705.9)
Net cash used in investing activities:		
Purchase of property, plant and equipment and intangible assets	(16,972.3)	(9,611.9)
Purchase of land use rights and leasehold land	(277.4)	(260.7)
Investment in jointly controlled entities	(63.9)	(34.0)
Investment in associates	(30.0)	-
Interest received	6.4	4.8
Net cash used in acquisitions of subsidiaries	(4,610.6)	(99.4)
Others	(259.7)	524.0
Total	(22,207.5)	(9,477.2)
Net cash generated from financing activities:		
Drawdown of loans	32,401.4	38,057.5
Repayments of loans	(16,049.1)	(27,644.3)
Proceeds from bonds	15,000.0	-
Repayments of bonds	(3,000.0)	(5,000.0)
Net contributions from owners and minority shareholders	184.8	13.1

Dividends paid by subsidiaries to minority shareholders	(386.9)	(59.5)
Dividends paid to the equity holders of the Company	<u>(1,456.9)</u>	<u>-</u>
Installment payment of shares and bonds issuance expenses	(50.0)	(62.0)
Drawdown/(repayments) of shareholder's loans, net	276.3	(456.3)
Interest paid	<u>(2,549.2)</u>	<u>(3,271.8)</u>
Total	<u>24,370.4</u>	<u>1,576.7</u>
Net Increase/(Decrease) in Cash and Cash Equivalents	7,186.9	(8,606.4)

(1) Primarily represents profit before income tax expense and minority interest as adjusted for depreciation, loss on disposal of property, plant and equipment, impairment loss on property, plant and equipment, interest income and interest expense.

(2) Represents changes in inventories, trade and notes receivable, other current assets, trade and notes payable and other payables and accrued expenses.

Net Cash Generated from/(Used in) Operating Activities

For the year ended December 31, 2009, we had a cash inflow before changes in working capital but after adjustments for non-cash items of RMB3,136.2 million and net cash used in operating activities of RMB705.9 million. Net cash used in operating activities primarily reflected our loss before income tax of RMB5,390.6 million, an outflow of RMB3,640.7 million for changes in working capital and income taxes of RMB201.4 million. The cash outflow from changes in working capital consisted primarily of (i) decrease in other payables and accrued expenses of RMB2,967.6 million and (ii) increase in trade and notes receivable of RMB1,342.4 million, primarily due to an increase in sales on credit, partly offset by increase in trade and notes payable of RMB1,585.9 million, which also reflected an increase in production activities as demand for our product started to recover in the second quarter 2009.

For the year ended December 31, 2008, we had a cash inflow before changes in working capital but after adjustments for non-cash items of RMB7,263.7 million and net cash generated from operating activities of RMB5,024.0 million.

Net cash flow generated from operating activities consisted primarily of our profit before tax of RMB134.5 million, an outflow of RMB731.1 million for changes in working capital and income tax of 1,508.6 million. The outflow from changes in working capital consisted primarily of (i) increase in inventories of RMB3,856.9 million and (ii) increase in other current assets of RMB1,303.4 million, partly offset by (i) increase in other payables and accrued expenses of RMB3,134.7 million and (ii) decrease in trade and notes receivable of RMB2,023.5 million.

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Net Cash Used in Investing Activities

Net cash used in investing activities decreased by 57.3% from RMB22,207.5 million in 2008 to RMB9,477.2 million in 2009, primarily because we selectively slowed down a number of projects. Net cash used in investing activities in 2009 consisted primarily of (i) purchase of property, plant and equipment of RMB9,597.3 million and (ii) purchase of land use rights and leasehold land of RMB260.7 million, partially offset by net cash inflow from settlement of futures contracts of RMB458.0 million.

Net cash used in investing activities was RMB22,207.5 million in 2008, consisting primarily of (i) purchase of property, plant and equipment of RMB16,791.5 million and (ii) payments of consideration for acquisitions of subsidiaries net of cash acquired of RMB4,610.6 million, partially offset by (i) dividend received of RMB33.1 million and (ii) proceeds from disposal of property, plant and equipment of RMB23.3 million.

Net Cash Generated from Financing Activities

Net cash generated from financing activities decreased significantly from RMB24,370.4 million in 2008 to RMB1,576.7 million in 2009, primarily because we did not issue short-term or long-term bonds in 2009 whereas in 2008, we issued short-term and long-term bonds in the aggregate principal of RMB15 billion. Net cash generated from financing activities in 2009 consisted primarily of drawdown of short-term and long-term loans of RMB38,057.5 million, partially offset by (i) repayments of short-term and long-term loans of RMB27,644.3 million and (ii) repayments of short-term bonds of RMB5,000.0 million.

Net cash generated from financing activities was RMB24,370.4 million in 2008, consisting primarily of (i) drawdown of short-term and long-term loans of RMB32,401.4 million and (ii) issuance of short-term and long-term bonds of RMB15,000.0 million, partially offset by (i) repayments of short-term and long-term loans of RMB16,049.1 million and (ii) repayments of short-term bonds of RMB3,000.0 million.

Borrowings and Banking Facilities

As of December 31,			
2007	2008	2009	2009
RMB	RMB	RMB	US\$
(in thousands)			

Short-term borrowings	11,346.5	22,290.2	25,819.8	3,782.6
Including: Short-term bonds	3,051.5	5,152.3	-	-
Long-term borrowings	1,7459.6	36,042.6	37,804.5	5,538.4
Including: Medium-term notes and long-term bonds	<u>1,979.7</u>	<u>11,873.1</u>	<u>11,905.2</u>	1,744.1